

**Project 10**

**West Coast Basin Barrier Project Unit 12 Injection and Observation Wells**

**Supporting Documents**

**Los Angeles County Flood Control District (LACFCD)**

**Seawater Barrier Database**

**Historical Injection Rate Data**

Inoperable Wells: 9N, 9R, and 9U

Operable Wells: 9J1, 9M1, 9P, 9T1, 9V1

## LACFCD Seawater Barrier database: Historical Injection Rate Information - Well 9N

PROJ	FCD	AQUIF	Date	Q (CFS)	RP_EL	ELEV	REMARKS
9N	726AT	LSP	19650804	0.00	146.80	0.00	HEAD TOO HIGH
9N	726AT	LSP	19650811	0.00	146.80	0.00	INST PORT CHLOR
9N	726AT	LSP	19651107	0.00	146.80	0.00	PACKER FAILURE
9N	726AT	LSP	19660320	0.00	146.80	0.00	LINE LEAKAGE
9N	726AT	LSP	19660404	0.00	146.80	0.00	REDEVELOPMENT
9N	726AT	LSP	19660602	0.00	146.80	0.00	REPLACE PACKER
9N	726AT	LSP	19661028	0.41	146.80	135.70	AIR GUAGE MALF.
9N	726AT	LSP	19661130	0.42	146.80	128.70	
9N	726AT	LSP	19661230	0.40	146.80	126.10	
9N	726AT	LSP	19670126	0.40	146.80	121.90	
9N	726AT	LSP	19670216	0.42	146.80	124.10	
9N	726AT	LSP	19670228	0.42	146.80	123.10	
9N	726AT	LSP	19670314	0.46	146.80	127.10	
9N	726AT	LSP	19670330	0.41	146.80	124.50	
9N	726AT	LSP	19670413	0.42	146.80	124.40	
9N	726AT	LSP	19670427	0.42	146.80	123.20	
9N	726AT	LSP	19670511	0.43	146.80	120.90	
9N	726AT	LSP	19670531	0.42	146.80	124.80	
9N	726AT	LSP	19670615	0.42	146.80	127.50	
9N	726AT	LSP	19670629	0.42	146.80	130.90	
9N	726AT	LSP	19670713	0.42	146.80	129.70	
9N	726AT	LSP	19670727	0.42	146.80	120.50	
9N	726AT	LSP	19670817	0.45	146.80	117.70	
9N	726AT	LSP	19670831	0.42	146.80	122.20	
9N	726AT	LSP	19670914	0.41	146.80	127.60	
9N	726AT	LSP	19670928	0.43	146.80	123.30	
9N	726AT	LSP	19671011	0.45	146.80	119.70	KESS FOAM
9N	726AT	LSP	19671026	0.45	146.80	121.40	
9N	726AT	LSP	19671116	0.42	146.80	119.80	
9N	726AT	LSP	19671128	0.42	146.80	119.00	
9N	726AT	LSP	19671213	0.42	146.80	119.90	
9N	726AT	LSP	19671228	0.42	146.80	121.50	
9N	726AT	LSP	19680118	0.42	146.80	123.00	
9N	726AT	LSP	19680125	0.44	146.80	124.20	
9N	726AT	LSP	19680215	0.42	146.80	124.90	
9N	726AT	LSP	19680229	0.42	146.80	123.50	
9N	726AT	LSP	19680314	0.42	146.80	24.20	
9N	726AT	LSP	19680328	0.43	146.80	123.20	
9N	726AT	LSP	19680411	0.42	146.80	122.00	
9N	726AT	LSP	19680430	0.42	146.80	129.10	
9N	726AT	LSP	19680516	0.42	146.80	133.10	
9N	726AT	LSP	19680529	0.41	146.80	134.90	
9N	726AT	LSP	19680613	0.44	146.80	133.10	
9N	726AT	LSP	19680627	0.32	146.80	105.70	
9N	726AT	LSP	19680711	0.30	146.80	103.20	
9N	726AT	LSP	19680731	0.32	146.80	107.80	
9N	726AT	LSP	19680815	0.31	146.80	105.50	
9N	726AT	LSP	19680829	0.30	146.80	106.80	
9N	726AT	LSP	19680912	0.30	146.80	100.50	
9N	726AT	LSP	19680927	0.00	146.80	-6.40	
9N	726AT	LSP	19681017	0.40	146.80	117.10	
9N	726AT	LSP	19681031	0.41	146.80	118.10	
9N	726AT	LSP	19681113	0.44	146.80	119.60	
9N	726AT	LSP	19681127	0.41	146.80	121.20	
9N	726AT	LSP	19681212	0.40	146.80	120.80	
9N	726AT	LSP	19681227	0.38	146.80	120.90	
9N	726AT	LSP	19690131	0.31	146.80	146.80	DEC. ERROR 1
9N	726AT	LSP	19690227	0.31	146.80	151.40	
9N	726AT	LSP	19690303	0.00	146.80	0.00	REDEVELOPMENT
9N	726AT	LSP	19690327	0.26	146.80	0.00	FOAM
9N	726AT	LSP	19690429	0.31	146.80	143.20	FOAM LAST MO
9N	726AT	LSP	19690528	0.45	146.80	169.90	
9N	726AT	LSP	19690626	0.45	146.80	171.00	
9N	726AT	LSP	19690730	0.43	146.80	167.60	
9N	726AT	LSP	19690828	0.43	146.80	163.00	
9N	726AT	LSP	19690930	0.43	146.80	169.90	
9N	726AT	LSP	19691030	0.48	146.80	167.60	
9N	726AT	LSP	19691126	0.48	146.80	146.80	
9N	726AT	LSP	19691230	0.30	146.80	143.00	CONSTRUCTION
9N	726AT	LSP	19700129	0.38	146.80	137.80	
9N	726AT	LSP	19700203	0.00	146.80	0.00	REPAIR CONDUCT
9N	726AT	LSP	19700226	0.25	146.80	142.20	
9N	726AT	LSP	19700326	0.30	146.80	109.70	
9N	726AT	LSP	19700429	0.30	146.80	138.90	
9N	726AT	LSP	19700528	0.30	146.80	136.30	

9N	726AT	LSP	19700625	0.30	146.80	165.20	
9N	726AT	LSP	19700730	0.28	146.80	179.10	
9N	726AT	LSP	19700827	0.25	146.80	186.00	
9N	726AT	LSP	19701001	0.12	146.80	179.10	
9N	726AT	LSP	19701029	0.20	146.80	158.30	
9N	726AT	LSP	19701125	0.21	146.80	146.80	
9N	726AT	LSP	19701230	0.25	146.80	134.80	
9N	726AT	LSP	19710128	0.30	146.80	128.00	
9N	726AT	LSP	19710225	0.31	146.80	124.40	
9N	726AT	LSP	19710330	0.31	146.80	123.40	
9N	726AT	LSP	19710429	0.31	146.80	125.30	
9N	726AT	LSP	19710527	0.34	146.80	123.50	
9N	726AT	LSP	19710630	0.00	146.80	9.60	LEAKAGE
9N	726AT	LSP	19710729	0.27	146.80	97.40	
9N	726AT	LSP	19710826	0.20	146.80	113.00	
9N	726AT	LSP	19710930	0.15	146.80	102.80	
9N	726AT	LSP	19711028	0.20	146.80	99.80	
9N	726AT	LSP	19711122	0.20	146.80	96.80	
9N	726AT	LSP	19711229	0.30	146.80	99.80	
9N	726AT	LSP	19720130	0.35	146.80	108.30	
9N	726AT	LSP	19720224	0.25	146.80	115.80	
9N	726AT	LSP	19720330	0.27	146.80	113.30	
9N	726AT	LSP	19720427	0.32	146.80	108.70	
9N	726AT	LSP	19720601	0.00	146.80	-3.20	
9N	726AT	LSP	19720629	0.42	146.80	107.70	
9N	726AT	LSP	19720727	0.41	146.80	116.40	
9N	726AT	LSP	19720831	0.42	146.80	135.50	
9N	726AT	LSP	19720928	0.45	146.80	124.90	
9N	726AT	LSP	19721017	0.00	146.80	0.00	OFF MWD REQST
9N	726AT	LSP	19721030	0.40	146.80	86.80	
9N	726AT	LSP	19721130	0.39	146.80	95.60	
9N	726AT	LSP	19721227	0.38	146.80	98.60	
9N	726AT	LSP	19730201	0.30	146.80	121.40	
9N	726AT	LSP	19730228	0.33	146.80	111.80	
9N	726AT	LSP	19730329	0.35	146.80	108.00	
9N	726AT	LSP	19730425	0.33	146.80	108.10	
9N	726AT	LSP	19730531	0.35	146.80	113.20	
9N	726AT	LSP	19730628	0.33	146.80	114.70	
9N	726AT	LSP	19730726	0.35	146.80	117.20	
9N	726AT	LSP	19730829	0.33	146.80	118.20	
9N	726AT	LSP	19730927	0.36	146.80	114.10	
9N	726AT	LSP	19731030	0.40	146.80	110.20	
9N	726AT	LSP	19731129	0.40	146.80	106.50	
9N	726AT	LSP	19731228	0.41	146.80	107.50	
9N	726AT	LSP	19740131	0.41	146.80	105.70	
9N	726AT	LSP	19740301	0.40	146.80	105.20	
9N	726AT	LSP	19740328	0.41	146.80	103.50	
9N	726AT	LSP	19740422	0.00	146.80	0.00	APPURT RELOCAT
9N	726AT	LSP	19740501	0.00	146.80	0.00	NO MEAS. TAKEN
9N	726AT	LSP	19740607	0.32	146.80	71.60	
9N	726AT	LSP	19740627	0.30	146.80	84.50	
9N	726AT	LSP	19740801	0.31	146.80	88.80	
9N	726AT	LSP	19740829	0.27	146.80	89.80	
9N	726AT	LSP	19740903	0.00	146.80	0.00	INST LATERALS
9N	726AT	LSP	19741003	0.00	146.80	-9.40	
9N	726AT	LSP	19741030	0.22	146.80	75.30	
9N	726AT	LSP	19741127	0.31	146.80	89.60	
9N	726AT	LSP	19741202	0.00	146.80	0.00	PRESSURE TEST
9N	726AT	LSP	19741212	0.00	146.80	0.00	6A-6B REQUIRED
9N	726AT	LSP	19741231	0.00	146.80	6.30	
9N	726AT	LSP	19750130	0.00	146.80	-6.30	
9N	726AT	LSP	19750226	0.00	146.80	-5.90	
9N	726AT	LSP	19750327	0.25	146.80	93.00	
9N	726AT	LSP	19750501	0.28	146.80	96.70	
9N	726AT	LSP	19750530	0.21	146.80	103.70	
9N	726AT	LSP	19750626	0.24	146.80	115.00	
9N	726AT	LSP	19750731	0.23	146.80	10.80	
9N	726AT	LSP	19750828	0.00	146.80	-10.20	RUPTURED LINE
9N	726AT	LSP	19751002	0.25	146.80	94.30	
9N	726AT	LSP	19751009	0.00	146.80	0.00	BREAK IN CASING
9N	726AT	LSP	19751030	0.44	146.80	125.40	
9N	726AT	LSP	19751126	0.45	146.80	153.70	
9N	726AT	LSP	19760102	0.42	146.80	158.30	
9N	726AT	LSP	19760129	0.45	146.80	157.20	
9N	726AT	LSP	19760226	0.43	146.80	157.20	
9N	726AT	LSP	19760401	0.46	146.80	160.70	
9N	726AT	LSP	19760429	0.41	146.80	158.30	



9N	726AT	LSP	19760527	0.41	146.80	152.90	
9N	726AT	LSP	19760701	0.40	146.80	156.60	
9N	726AT	LSP	19760729	0.39	146.80	158.10	
9N	726AT	LSP	19760902	0.42	146.80	146.80	
9N	726AT	LSP	19761001	0.41	146.80	140.10	
9N	726AT	LSP	19761027	0.45	146.80	137.30	
9N	726AT	LSP	19761126	0.48	146.80	129.80	
9N	726AT	LSP	19761230	0.35	146.80	179.10	
9N	726AT	LSP	19770127	0.35	146.80	180.30	
9N	726AT	LSP	19770303	0.31	146.80	179.10	
9N	726AT	LSP	19770331	0.35	146.80	172.20	
9N	726AT	LSP	19770428	0.37	146.80	160.70	
9N	726AT	LSP	19770603	0.00	146.80	16.60	
9N	726AT	LSP	19770630	0.00	146.80	16.80	
9N	726AT	LSP	19770728	0.00	146.80	16.80	CASING SEPARATI
9N	726AT	LSP	19770901	0.00	146.80	14.00	CASING SEPARATN
9N	726AT	LSP	19770929	0.00	146.80	15.00	CASING SEPARATN
9N	726AT	LSP	19771027	0.00	146.80	14.20	CASING SEPARATN
9N	726AT	LSP	19771201	0.00	146.80	14.00	CASING SEPARATN
9N	726AT	LSP	19771229	0.00	146.80	13.80	CASING SEPARATN
9N	726AT	LSP	19780126	0.00	146.80	14.20	CASING SEPARATN
9N	726AT	LSP	19780224	0.00	146.80	13.90	CASING SEPARATN
9N	726AT	LSP	19780330	0.00	146.80	13.00	CASING SEPARATN
9N	726AT	LSP	19780427	0.00	146.80	13.40	CASING SEPARATN
9N	726AT	LSP	19780601	0.00	146.80	12.90	CASING SEPARATN
9N	726AT	LSP	19780629	0.00	146.80	12.40	CASING SEPARATN
9N	726AT	LSP	19780727	0.00	146.80	11.80	CASING SEPARATN
9N	726AT	LSP	19780831	0.00	146.80	12.40	CASING SEPARATN
9N	726AT	LSP	19780928	0.00	146.80	12.40	CASING SEPARATN
9N	726AT	LSP	19781102	0.00	146.80	12.20	CASING SEPARATN
9N	726AT	LSP	19781130	0.00	146.80	12.20	CASING SEPARATION
9N	726AT	LSP	19781228	0.00	146.80	0.00	
9N	726AT	LSP	19790201	0.00	146.80	12.70	
9N	726AT	LSP	19790301	0.00	146.80	0.00	
9N	726AT	LSP	19790329	0.00	146.80	0.00	
9N	726AT	LSP	19790426	0.00	146.80	0.00	
9N	726AT	LSP	19790524	0.00	146.80	11.80	
9N	726AT	LSP	19790713	0.00	146.80	20.90	
9N	726AT	LSP	19790720	0.00	146.80	0.00	
9N	726AT	LSP	19790830	0.00	146.80	10.30	
9N	726AT	LSP	19790927	0.00	146.80	13.00	
9N	726AT	LSP	19791102	0.00	146.80	0.00	
9N	726AT	LSP	19791129	0.00	146.80	0.00	
9N	726AT	LSP	19791227	0.00	146.80	14.80	
9N	726AT	LSP	19800131	0.00	146.80	0.00	CASING SEPARATION
9N	726AT	LSP	19800227	0.00	146.80	13.40	CASING SEPARATION
9N	726AT	LSP	19800326	0.00	146.80	0.10	
9N	726AT	LSP	19800502	0.00	146.80	0.00	CASING SEPARATION
9N	726AT	LSP	19800530	0.00	146.80	0.00	CASING SEPARATION
9N	726AT	LSP	19800626	0.00	146.80	0.00	CASING SEPARATION
9N	726AT	LSP	19800807	0.00	146.80	0.00	CASING SEPARATION
9N	726AT	LSP	19800904	0.00	146.80	17.80	CASING SEPARATION
9N	726AT	LSP	19801002	0.00	146.80	0.00	CASING SEPARATION
9N	726AT	LSP	19801030	0.00	146.80	0.00	
9N	726AT	LSP	19801128	0.00	146.80	17.10	CASING SEPARATION
9N	726AT	LSP	19810102	0.00	146.80	0.00	CASING SEPARATION
9N	726AT	LSP	19810130	0.00	146.80	16.70	CASING SEPARATION
9N	726AT	LSP	19810226	0.00	146.80	17.10	CASING SEPARATION
9N	726AT	LSP	19810326	0.00	146.80	17.10	CASING SEPARATION
9N	726AT	LSP	19810430	0.00	146.80	16.50	CASING SEPARATION
9N	726AT	LSP	19810529	0.00	146.80	16.60	CASING SEPARATION
9N	726AT	LSP	19810702	0.00	146.80	16.30	CASING SEPARATION
9N	726AT	LSP	19810730	0.00	146.80	10.70	CASING SEPARATION
9N	726AT	LSP	19810827	0.00	146.80	13.70	CASING SEPARATION
9N	726AT	LSP	19811001	0.00	146.80	14.90	CASING SEPARATION
9N	726AT	LSP	19811029	0.00	146.80	15.10	CASING SEPARATION
9N	726AT	LSP	19811123	0.00	146.80	0.00	REPAIR CASING
9N	726AT	LSP	19811125	0.00	146.80	14.90	CASING SEPARATION
9N	726AT	LSP	19811222	0.00	146.80	0.00	CASING SEPARATION
9N	726AT	LSP	19820128	0.00	146.80	0.00	CASING SEPARATION
9N	726AT	LSP	19820224	0.00	146.80	0.00	CASING SEPARATION
9N	726AT	LSP	19820407	0.00	146.80	0.00	CASING SEPARATION
9N	726AT	LSP	19820504	0.00	146.80	24.70	CASING SEPARATIO
9N	726AT	LSP	19820602	0.00	146.80	26.40	
9N	726AT	LSP	19820630	0.01	146.80	28.20	
9N	726AT	LSP	19820728	0.01	146.80	32.90	
9N	726AT	LSP	19820909	0.01	146.80	35.10	

9N	726AT	LSP	19820921	0.01	146.80	35.90	
9N	726AT	LSP	19821102	0.01	146.80	46.10	
9N	726AT	LSP	19821201	0.01	146.80	46.80	
9N	726AT	LSP	19830103	0.01	146.80	31.90	
9N	726AT	LSP	19830128	0.01	146.80	59.20	
9N	726AT	LSP	19830225	0.01	146.80	65.40	
9N	726AT	LSP	19830330	0.01	146.80	65.30	
9N	726AT	LSP	19830429	0.01	146.80	69.20	
9N	726AT	LSP	19830526	0.01	146.80	74.40	
9N	726AT	LSP	19830624	0.01	146.80	74.10	
9N	726AT	LSP	19830722	0.01	146.80	74.40	
9N	726AT	LSP	19830902	0.01	146.80	68.30	
9N	726AT	LSP	19830929	0.01	146.80	69.20	
9N	726AT	LSP	19831021	0.00	146.80	0.00	REPAIR HEADER
9N	726AT	LSP	19831028	0.00	146.80	0.00	BROKEN COND
9N	726AT	LSP	19831208	0.00	146.80	0.00	NO MEAS.
9N	726AT	LSP	19840106	0.00	146.80	10.80	
9N	726AT	LSP	19840202	0.00	146.80	12.80	
9N	726AT	LSP	19840302	0.00	146.80	13.30	BROKEN
9N	726AT	LSP	19840328	0.00	146.80	13.80	
9N	726AT	LSP	19840425	0.00	146.80	14.20	
9N	726AT	LSP	19840523	0.00	146.80	13.30	
9N	726AT	LSP	19840628	0.00	146.80	13.00	
9N	726AT	LSP	19840724	0.00	146.80	13.30	
9N	726AT	LSP	19840829	0.00	146.80	13.00	SEE NOTE 1
9N	726AT	LSP	19840926	0.00	146.80	12.90	SEE NOTE 1
9N	726AT	LSP	19841030	0.00	146.80	13.20	SEE NOTE 1
9N	726AT	LSP	19841129	0.00	146.80	12.80	SEE NOTE 1
9N	726AT	LSP	19841227	0.00	146.80	12.40	SEE NOTE 1
9N	726AT	LSP	19850130	0.00	146.80	12.80	NOT NEEDED FOR PR
9N	726AT	LSP	19850227	0.00	146.80	13.00	SEE NOTE 1
9N	726AT	LSP	19850328	0.00	146.80	11.80	SEE NOTE 1
9N	726AT	LSP	19850424	0.00	146.80	11.80	SEE NOTE 1
9N	726AT	LSP	19850530	0.00	146.80	12.10	DAMAGED SLEEVE
9N	726AT	LSP	19850626	0.00	146.80	12.10	DAMAGED SLEEVE
9N	726AT	LSP	19850730	0.00	146.80	12.10	DAMAGED SLEEVE
9N	726AT	LSP	19850828	0.00	146.80	11.00	DAMAGED SLEEVE
9N	726AT	LSP	19851001	0.00	146.80	3.80	
9N	726AT	LSP	19851030	0.00	146.80	4.80	
9N	726AT	LSP	19851204	0.00	146.80	8.50	DAMAGED SLEEVE
9N	726AT	LSP	19860102	0.00	146.80	9.20	DAMAGED SLEEVE
9N	726AT	LSP	19860129	0.00	146.80	8.80	DAMAGED SLEEVE
9N	726AT	LSP	19860226	0.00	146.80	9.90	DAMAGED SLEEVE
9N	726AT	LSP	19860402	0.00	146.80	9.00	DAMAGED SLEEVE
9N	726AT	LSP	19860501	0.00	146.80	8.60	DAMAGED SLEEVE
9N	726AT	LSP	19860529	0.01	146.80	19.80	DAMAGED SLEEVE
9N	726AT	LSP	19860703	0.01	146.80	27.80	DAMAGED SLEEVE
9N	726AT	LSP	19860731	0.01	146.80	27.10	DAMAGED SLEEVE
9N	726AT	LSP	19860827	0.01	146.80	36.50	DAMAGED SLEEVE
9N	726AT	LSP	19861001	0.01	146.80	40.80	DAMAGED SLEEVE
9N	726AT	LSP	19861030	0.01	146.80	52.80	DAMAGED SLEEVE
9N	726AT	LSP	19861125	0.01	146.80	52.80	DAMAGED SLEEVE
9N	726AT	LSP	19861231	0.01	146.80	57.30	DAMAGED SLEEVE
9N	726AT	LSP	19870130	0.01	146.80	59.30	DAMAGED SLEEVE
9N	726AT	LSP	19870225	0.01	146.80	62.30	DAMAGED SLEEVE
9N	726AT	LSP	19870401	0.01	146.80	67.00	DAMAGED SLEEVE
9N	726AT	LSP	19870429	0.01	146.80	68.50	DAMAGED SLEEVE
9N	726AT	LSP	19870527	0.01	146.80	68.50	DAMAGED SLEEVE
9N	726AT	LSP	19870701	0.01	146.80	69.70	DAMAGED SLEEVE
9N	726AT	LSP	19870730	0.01	146.80	69.30	DAMAGED SLEEVE
9N	726AT	LSP	19870827	0.01	146.80	70.70	DAMAGED SLEEVE
9N	726AT	LSP	19870930	0.01	146.80	69.80	DAMAGED SLEEVE
9N	726AT	LSP	19871028	0.01	146.80	66.80	DAMAGED SLEEVE
9N	726AT	LSP	19871125	0.01	146.80	69.20	DAMAGED SLEEVE
9N	726AT	LSP	19871229	0.01	146.80	65.50	DAMAGED SLEEVE
9N	726AT	LSP	19880127	0.01	146.80	78.30	DAMAGED SLEEVE
9N	726AT	LSP	19880223	0.01	146.80	80.70	DAMAGED SLEEVE
9N	726AT	LSP	19880330	0.01	146.80	86.10	DAMAGED SLEEVE
9N	726AT	LSP	19880426	0.01	146.80	85.80	DAMAGED SLEEVE
9N	726AT	LSP	19880524	0.01	146.80	88.30	DAMAGED SLEEVE
9N	726AT	LSP	19880629	0.01	146.80	89.30	DAMAGED SLEEVE
9N	726AT	LSP	19880726	0.01	146.80	88.00	DAMAGED SLEEVE
9N	726AT	LSP	19880830	0.01	146.80	87.80	DAMAGED SLEEVE
9N	726AT	LSP	19880929	0.01	146.80	84.30	DAMAGED SLEEVE
9N	726AT	LSP	19881025	0.01	146.80	83.50	DAMAGED SLEEVE
9N	726AT	LSP	19881130	0.01	146.80	90.70	DAMAGED SLEEVE
9N	726AT	LSP	19881229	0.01	146.80	92.60	DAMAGED SLEEVE

9N	726AT	LSP	19890125	0.01	146.80	95.80	DAMAGED SLEEVE
9N	726AT	LSP	19890223	0.01	146.80	98.80	DAMAGED SLEEVE
9N	726AT	LSP	19890329	0.01	146.80	95.80	DAMAGED SLEEVE
9N	726AT	LSP	19890504	0.01	146.80	100.80	DAMAGED SLEEVE
9N	726AT	LSP	19890601	0.01	146.80	114.80	DAMAGED SLEEVE
9N	726AT	LSP	19890628	0.01	146.80	107.30	REPAIR
9N	726AT	LSP	19890802	0.01	146.80	88.10	REPAIR
9N	726AT	LSP	19890830	0.01	146.80	79.80	DAMAGED SLEEVE
9N	726AT	LSP	19890928	0.01	146.80	79.50	
9N	726AT	LSP	19891102	0.01	146.80	84.80	
9N	726AT	LSP	19891129	0.01	146.80	97.80	
9N	726AT	LSP	19900103	0.01	146.80	82.00	
9N	726AT	LSP	19900131	0.01	146.80	104.50	
9N	726AT	LSP	19900228	0.01	146.80	108.30	
9N	726AT	LSP	19900404	0.01	146.80	111.60	
9N	726AT	LSP	19900503	0.01	146.80	111.50	
9N	726AT	LSP	19900601	0.01	146.80	92.70	
9N	726AT	LSP	19900705	0.01	146.80	103.80	
9N	726AT	LSP	19900801	0.01	146.80	107.80	
9N	726AT	LSP	19900830	0.01	146.80	108.20	
9N	726AT	LSP	19901003	0.01	146.80	100.00	
9N	726AT	LSP	19901031	0.01	146.80	105.70	
9N	726AT	LSP	19901205	0.01	146.80	112.60	
9N	726AT	LSP	19910103	0.01	146.80	116.80	
9N	726AT	LSP	19910130	0.01	146.80	118.30	
9N	726AT	LSP	19910227	0.01	146.80	119.10	
9N	726AT	LSP	19910403	0.01	146.80	115.80	
9N	726AT	LSP	19910501	0.01	146.80	81.90	
9N	726AT	LSP	19910612	0.00	146.80	7.80	*
9N	726AT	LSP	19910714	0.00	146.80	5.20	MEASURED 910717
9N	726AT	LSP	19910807	0.00	146.80	-5.50	OFF FOR CONSTR.
9N	726AT	LSP	19910906	0.01	146.80	69.30	
9N	726AT	LSP	19911003	0.01	146.80	70.70	
9N	726AT	LSP	19911030	0.01	146.80	73.30	
9N	726AT	LSP	19911127	0.01	146.80	76.50	
9N	726AT	LSP	19911227	0.01	146.80	82.30	
9N	726AT	LSP	19920127	0.01	146.80	92.30	
9N	726AT	LSP	19920227	0.01	146.80	93.70	
9N	726AT	LSP	19920408	0.01	146.80	69.30	
9N	726AT	LSP	19920429	0.01	146.80	80.60	
9N	726AT	LSP	19920603	0.01	146.80	88.70	
9N	726AT	LSP	19920701	0.01	146.80	77.10	
9N	726AT	LSP	19920805	0.01	146.80	83.80	
9N	726AT	LSP	19920902	0.01	146.80	90.20	
9N	726AT	LSP	19921002	0.01	146.80	92.70	
9N	726AT	LSP	19921028	0.01	146.80	92.20	
9N	726AT	LSP	19921203	0.01	146.80	100.60	
9N	726AT	LSP	19921217	0.01	146.80	100.60	
9N	726AT	LSP	19930128	0.01	146.80	107.30	
9N	726AT	LSP	19930224	0.00	146.80	7.80	
9N	726AT	LSP	19930331	0.72	146.80	86.30	
9N	726AT	LSP	19930428	0.72	146.80	95.50	
9N	726AT	LSP	19930603	0.72	146.80	91.30	
9N	726AT	LSP	19930630	0.72	146.80	96.00	
9N	726AT	LSP	19930728	0.72	146.80	98.50	
9N	726AT	LSP	19930826	0.01	146.80	101.60	
9N	726AT	LSP	19931001	0.01	146.80	80.20	
9N	726AT	LSP	19931026	0.01	146.80	76.30	
9N	726AT	LSP	19931124	0.01	146.80	76.80	
9N	726AT	LSP	19931227	0.01	146.80	76.30	
9N	726AT	LSP	19940127	0.19	146.80	47.80	
9N	726AT	LSP	19940302	0.00	146.80	48.80	
9N	726AT	LSP	19940323	0.01	146.80	48.80	
9N	726AT	LSP	19940423	0.00	146.80	6.80	OFF
9N	726AT	LSP	19940523	0.00	146.80	6.80	OFF
9N	726AT	LSP	19940706	0.01	146.80	43.70	
9N	726AT	LSP	19940803	0.01	146.80	41.80	
9N	726AT	LSP	19940902	0.01	146.80	39.00	
9N	726AT	LSP	19940929	0.01	146.80	53.80	
9N	726AT	LSP	19941026	0.01	146.80	56.90	
9N	726AT	LSP	19941130	0.01	146.80	55.50	
9N	726AT	LSP	19941229	0.39	146.80	66.80	
9N	726AT	LSP	19950426	0.00	146.80	9.80	*
9N	726AT	LSP	19950601	0.00	146.80	10.80	*
9N	726AT	LSP	19950628	0.00	146.80	10.80	*
9N	726AT	LSP	19950726	0.00	146.80	10.80	*
9N	726AT	LSP	19950831	0.00	146.80	12.80	*

9N	726AT	LSP	19950920	0.00	146.80	11.90	*
9N	726AT	LSP	19951101	0.00	146.80	11.80	*
9N	726AT	LSP	19960110	0.00	146.80	8.70	*
9N	726AT	LSP	19960208	0.00	146.80	9.30	*
9N	726AT	LSP	19960306	0.00	146.80	9.90	*
9N	726AT	LSP	19960403	0.00	146.80	10.80	*
9N	726AT	LSP	19960509	0.00	146.80	11.80	*
9N	726AT	LSP	19960829	0.00	146.80	13.00	
9N	726AT	LSP	19961106	0.00	146.80	7.90	
9N	726AT	LSP	19970106	0.00	146.80	11.80	
9N	726AT	LSP	19970130	0.00	146.80	8.30	
9N	726AT	LSP	19970205	0.00	146.80	8.30	
9N	726AT	LSP	19970304	0.00	146.80	8.30	
9N	726AT	LSP	19970306	0.00	146.80	10.80	
9N	726AT	LSP	19970325	0.00	146.80	10.80	
9N	726AT	LSP	19970417	0.00	146.80	12.80	Repair, dmdg sle
9N	726AT	LSP	19970515	0.00	146.80	11.30	Repair, dmdg sle
9N	726AT	LSP	19970604	0.00	146.80	11.80	Repair, dmdg sle
9N	726AT	LSP	19970610	0.00	146.80	11.80	Repair, dmdg sle
9N	726AT	LSP	19970618	0.00	146.80	11.80	Repair, dmdg sle
9N	726AT	LSP	19970626	0.00	146.80	11.80	Repair, dmdg sle
9N	726AT	LSP	19970707	0.00	146.80	11.80	Repair, dmdg sle
9N	726AT	LSP	19970717	0.00	146.80	11.80	Repair, dmdg sle
9N	726AT	LSP	19970722	0.00	146.80	10.80	Repair, dmdg sle
9N	726AT	LSP	19970813	0.00	146.80	10.90	Repair, dmdg sle
9N	726AT	LSP	19970904	0.00	146.80	12.80	Repair, dmdg sle
9N	726AT	LSP	19970912	0.00	146.80	14.80	Repair, dmdg sle
9N	726AT	LSP	19970922	0.00	146.80	11.80	Repair, dmdg sle
9N	726AT	LSP	19971002	0.00	146.80	8.30	Repair, dmdg sle
9N	726AT	LSP	19971009	0.00	146.80	8.80	Repair, dmdg sle
9N	726AT	LSP	19971022	0.00	146.80	12.80	Repair, dmdg sle
9N	726AT	LSP	19971028	0.00	146.80	13.40	Repair, dmdg sle
9N	726AT	LSP	19971105	0.00	146.80	12.80	Repair, dmdg sle
9N	726AT	LSP	19971120	0.00	146.80	13.10	Repair, dmdg sle
9N	726AT	LSP	19971203	0.00	146.80	13.00	Repair, dmdg sle
9N	726AT	LSP	19971210	0.00	146.80	12.80	Repair, dmdg sle
9N	726AT	LSP	19971231	0.00	146.80	12.80	Repair, dmdg sle
9N	726AT	LSP	19980108	0.00	146.80	12.80	Repair, dmdg sle
9N	726AT	LSP	19980116	0.00	146.80	12.80	Repair, dmdg sle
9N	726AT	LSP	19980121	0.00	146.80	12.80	Repair, dmdg sle
9N	726AT	LSP	19980128	0.00	146.80	12.80	Repair, dmdg sle
9N	726AT	LSP	19980304	0.00	146.80	12.80	Repair, dmdg sle
9N	726AT	LSP	19980319	0.00	146.80	13.00	Repair, dmdg sle
9N	726AT	LSP	19980331	0.00	146.80	14.80	Repair, dmdg sle
9N	726AT	LSP	19980430	0.00	146.80	15.30	Repair, dmdg sleeve
9N	726AT	LSP	19980526	0.00	146.80	14.60	Repair, dmdg sleeve
9N	726AT	LSP	19990817	0.00	146.80	12.80	Repair, dmdg sleeve
9N	726AT	LSP	20000508	0.00	146.80	12.90	Repair, dmdg sleeve
9N	726AT	LSP	20010308	0.00	146.80	13.80	Repair, dmdg sleeve
9N	726AT	LSP	20010314	0.00	146.80	14.00	Repair, dmdg sleeve
9N	726AT	LSP	20010321	0.00	146.80	13.80	Repair, dmdg sleeve
9N	726AT	LSP	20010404	0.00	146.80	14.00	Repair, dmdg sleeve
9N	726AT	LSP	20010411	0.00	146.80	13.80	Repair, dmdg sleeve
9N	726AT	LSP	20010419	0.00	146.80	14.20	Repair, dmdg sleeve
9N	726AT	LSP	20010503	0.00	146.80	14.40	Repair, dmdg sleeve
9N	726AT	LSP	20010509	0.00	146.80	146.80	Repair, dmdg sleeve
9N	726AT	LSP	20010518	0.00	146.80	6.80	Repair, dmdg sleeve
9N	726AT	LSP	20010531	0.00	146.80	6.80	Repair, dmdg sleeve
9N	726AT	LSP	20010606	0.00	146.80	6.80	Repair, dmdg sleeve
9N	726AT	LSP	20010613	0.00	146.80	6.80	Repair, dmdg sleeve
9N	726AT	LSP	20010705	0.00	146.80	6.80	Repair, dmdg sleeve
9N	726AT	LSP	20010725	0.00	146.80	146.80	Repair, dmdg sleeve
9N	726AT	LSP	20010810	0.00	146.80	146.80	Repair, dmdg sleeve
9N	726AT	LSP	20010926	0.00	146.80	23.90	Repair, dmdg sleeve
9N	726AT	LSP	20011011	0.00	146.80	24.20	Repair, dmdg sleeve
9N	726AT	LSP	20011023	0.00	146.80	23.90	Repair, dmdg sleeve
9N	726AT	LSP	20011031	0.00	146.80	6.80	Repair, dmdg sleeve
9N	726AT	LSP	20011107	0.00	146.80	6.80	Repair, dmdg sleeve
9N	726AT	LSP	20011204	0.00	146.80	6.80	Repair, dmdg sleeve
9N	726AT	LSP	20011210	0.00	146.80	6.80	Repair, dmdg sleeve
9N	726AT	LSP	20011220	0.00	146.80	6.80	Repair, dmdg sleeve
9N	726AT	LSP	20020115	0.00	146.80	6.80	Repair, dmdg sleeve
9N	726AT	LSP	20020204	0.00	146.80	0.00	Repair, dmdg sleeve
9N	726AT	LSP	20020221	0.00	146.80	15.70	Repair, dmdg sleeve
9N	726AT	LSP	20020227	0.00	146.80	16.10	Repair, dmdg sleeve
9N	726AT	LSP	20020307	0.00	146.80	16.10	Repair, dmdg sleeve
9N	726AT	LSP	20020314	0.00	146.80	16.30	Repair, dmdg sleeve

9N	726AT	LSP	20020404	0.00	146.80	16.20	Repair, dmdg sleeve
9N	726AT	LSP	20020425	0.00	146.80	15.40	Repair, dmdg sleeve
9N	726AT	LSP	20020508	0.00	146.80	15.00	Repair, dmdg sleeve
9N	726AT	LSP	20020522	0.00	146.80	16.00	Repair, dmdg sleeve
9N	726AT	LSP	20020606	0.00	146.80	15.90	Repair, dmdg sleeve
9N	726AT	LSP	20020612	0.00	146.80	16.50	Repair, dmdg sleeve
9N	726AT	LSP	20020711	0.00	146.80	16.50	Repair, dmdg sleeve
9N	726AT	LSP	20020726	0.00	146.80	17.10	Repair, dmdg sleeve
9N	726AT	LSP	20020826	0.00	146.80	18.40	Repair, dmdg sleeve
9N	726AT	LSP	20020905	0.00	146.80	13.80	Repair, dmdg sleeve
9N	726AT	LSP	20020920	0.00	146.80	14.70	Repair, dmdg sleeve
9N	726AT	LSP	20021004	0.00	146.80	12.70	Repair, dmdg sleeve
9N	726AT	LSP	20021018	0.00	146.80	12.00	Repair, dmdg sleeve
9N	726AT	LSP	20021104	0.00	146.80	12.00	Repair, dmdg sleeve
9N	726AT	LSP	20021126	0.00	146.80	9.80	Repair, dmdg sleeve
9N	726AT	LSP	20021207	0.00	146.80	13.80	Repair, dmdg sleeve
9N	726AT	LSP	20030108	0.00	146.80	4.50	Repair, dmdg sleeve
9N	726AT	LSP	20030123	0.00	146.80	4.50	Repair, dmdg sleeve
9N	726AT	LSP	20030210	0.00	146.80	4.50	Repair, dmdg sleeve
9N	726AT	LSP	20030220	0.00	146.80	4.50	Repair, dmdg sleeve
9N	726AT	LSP	20030318	0.00	146.80	23.00	Repair, dmdg sleeve
9N	726AT	LSP	20030325	0.00	146.80	4.50	Repair, dmdg sleeve
9N	726AT	LSP	20030507	0.00	146.80	12.80	Repair, dmdg sleeve
9N	726AT	LSP	20030521	0.00	146.80	12.80	Repair, dmdg sleeve
9N	726AT	LSP	20030609	0.00	146.80	12.80	Repair, dmdg sleeve
9N	726AT	LSP	20030624	0.00	146.80	12.80	Repair, dmdg sleeve
9N	726AT	LSP	20030710	0.00	146.80	12.80	Repair, dmdg sleeve
9N	726AT	LSP	20030904	0.00	146.80	13.10	Repair, dmdg sleeve
9N	726AT	LSP	20031010	0.00	146.80	12.90	Repair, dmdg sleeve
9N	726AT	LSP	20031106	0.00	146.80	13.00	Repair, dmdg sleeve
9N	726AT	LSP	20031211	0.00	146.80	12.80	Repair, dmdg sleeve
9N	726AT	LSP	20031229	0.00	146.80	12.00	Repair, dmdg sleeve
9N	726AT	LSP	20040114	0.00	146.80	12.50	Repair, dmdg sleeve
9N	726AT	LSP	20040203	0.00	146.80	11.80	Repair, dmdg sleeve
9N	726AT	LSP	20040211	0.00	146.80	13.20	Repair, dmdg sleeve
9N	726AT	LSP	20040305	0.00	146.80	11.60	Repair, dmdg sleeve
9N	726AT	LSP	20040401	0.00	146.80	12.50	Repair, dmdg sleeve
9N	726AT	LSP	20040414	0.00	146.80	11.40	Repair, dmdg sleeve
9N	726AT	LSP	20040513	0.00	146.80	11.80	Repair, dmdg sleeve
9N	726AT	LSP	20040603	0.00	146.80	11.70	Repair, dmdg sleeve
9N	726AT	LSP	20040701	0.00	146.80	9.80	Repair, dmdg sleeve
9N	726AT	LSP	20040708	0.00	146.80	10.10	Repair, dmdg sleeve
9N	726AT	LSP	20040715	0.00	146.80	10.10	Repair, dmdg sleeve
9N	726AT	LSP	20040812	0.00	146.80	9.20	Repair, dmdg sleeve
9N	726AT	LSP	20040824	0.00	146.80	9.10	Repair, dmdg sleeve
9N	726AT	LSP	20040902	0.00	146.80	9.00	Repair, dmdg sleeve
9N	726AT	LSP	20040929	0.00	146.80	8.80	Repair, dmdg sleeve
9N	726AT	LSP	20041006	0.00	146.80	8.80	Repair, dmdg sleeve
9N	726AT	LSP	20041104	0.00	146.80	8.80	Repair, dmdg sleeve
9N	726AT	LSP	20041222	0.00	146.80	8.90	Repair, dmdg sleeve
9N	726AT	LSP	20050414	0.00	146.80	8.20	Repair, dmdg sleeve
9N	726AT	LSP	20050421	0.00	146.80	8.20	Repair, dmdg sleeve
9N	726AT	LSP	20050504	0.00	146.80	8.80	Repair, dmdg sleeve
9N	726AT	LSP	20050526	0.00	146.80	8.80	Repair, dmdg sleeve
9N	726AT	LSP	20050609	0.00	146.80	9.80	Repair, dmdg sleeve
9N	726AT	LSP	20050616	0.00	146.80	9.60	Repair, dmdg sleeve
9N	726AT	LSP	20050627	0.00	146.80	9.80	Repair, dmdg sleeve
9N	726AT	LSP	20050728	0.00	146.80	9.60	Repair, dmdg sleeve
9N	726AT	LSP	20050804	0.00	146.80	9.80	Repair, dmdg sleeve
9N	726AT	LSP	20050817	0.00	146.80	9.80	Repair, dmdg sleeve
9N	726AT	LSP	20050824	0.00	146.80	9.60	Repair, dmdg sleeve
9N	726AT	LSP	20050906	0.00	146.80	9.80	Repair, dmdg sleeve
9N	726AT	LSP	20050919	0.00	146.80	9.80	Repair, dmdg sleeve
9N	726AT	LSP	20051031	0.00	146.80	10.00	Repair, dmdg sleeve
9N	726AT	LSP	20051116	0.00	146.80	9.80	Repair, dmdg sleeve
9N	726AT	LSP	20051201	0.00	146.80	10.80	Repair, dmdg sleeve
9N	726AT	LSP	20060106	0.00	146.80	10.80	Repair, dmdg sleeve
9N	726AT	LSP	20060118	0.00	146.80	10.80	Repair, dmdg sleeve
9N	726AT	LSP	20060302	0.00	146.80	9.80	Damaged
9N	726AT	LSP	20060425	0.00	146.80	10.80	Damaged
9N	726AT	LSP	20060508	0.00	146.80	10.80	Damaged
9N	726AT	LSP	20060802	0.00	146.80	10.80	Damaged sleeve.
9N	726AT	LSP	20060814	0.00	146.80	10.80	Damaged sleeve.
9N	726AT	LSP	20060907	0.00	146.80	10.80	Damaged sleeve.
9N	726AT	LSP	20061012	0.00	146.80	10.80	Damaged sleeve.
9N	726AT	LSP	20061019	0.00	146.80	10.80	Damaged sleeve.
9N	726AT	LSP	20061206	0.00	146.80	10.80	Damaged sleeve.

9N	726AT	LSP	20061226	0.00	146.80	10.80	Damaged sleeve.
9N	726AT	LSP	20070104	0.00	146.80	10.80	Damaged sleeve.
9N	726AT	LSP	20070110	0.00	146.80	10.80	Damaged sleeve.
9N	726AT	LSP	20070131	0.00	146.80	10.80	Damaged sleeve.
9N	726AT	LSP	20070208	0.00	146.80	10.80	Damaged sleeve.
9N	726AT	LSP	20070215	0.00	146.80	10.80	
9N	726AT	LSP	20070228	0.00	146.80	10.80	Damaged sleeve.
9N	726AT	LSP	20070314	0.00	146.80	10.80	Damaged sleeve.
9N	726AT	LSP	20070319	0.00	146.80	13.80	Damaged sleeve.
9N	726AT	LSP	20070502	0.00	146.80	13.80	
9N	726AT	LSP	20070511	0.00	146.80	13.80	
9N	726AT	LSP	20070516	0.00	146.80	13.80	
9N	726AT	LSP	20070606	0.00	146.80	13.80	
9N	726AT	LSP	20070613	0.00	146.80	13.80	Disassembled
9N	726AT	LSP	20070627	0.00	146.80	13.80	Disassembled
9N	726AT	LSP	20070706	0.00	146.80	13.80	
9N	726AT	LSP	20070711	0.00	146.80	13.80	Off for many years
9N	726AT	LSP	20070726	0.00	146.80	13.80	Off for many years
9N	726AT	LSP	20070801	0.00	146.80	13.80	
9N	726AT	LSP	20070816	0.00	146.80	13.80	Off for many years
9N	726AT	LSP	20070822	0.00	146.80	13.80	Off for many years
9N	726AT	LSP	20070913	0.00	146.80	13.80	Off for many years
9N	726AT	LSP	20070919	0.00	146.80	13.80	Off for many years
9N	726AT	LSP	20070926	0.00	146.80	13.80	Off for many years
9N	726AT	LSP	20071015	0.00	146.80	13.80	Off for many years
9N	726AT	LSP	20071018	0.00	146.80	13.80	Off for many years
9N	726AT	LSP	20071022	0.00	146.80	13.80	Off for many years
9N	726AT	LSP	20071031	0.00	146.80	13.80	Off for many years
9N	726AT	LSP	20071105	0.00	146.80	13.80	Off for many years
9N	726AT	LSP	20071113	0.00	146.80	13.80	Off for many years
9N	726AT	LSP	20071203	0.00	146.80	13.80	Off for many years
9N	726AT	LSP	20071206	0.00	146.80	13.80	Off many years
9N	726AT	LSP	20071212	0.00	146.80	13.80	Off for many years
9N	726AT	LSP	20071221	0.00	146.80	13.80	Off many years.
9N	726AT	LSP	20080108	0.00	146.80	13.80	Off many years
9N	726AT	LSP	20080116	0.00	146.80	13.80	Off many years
9N	726AT	LSP	20080123	0.00	146.80	13.80	Off many years
9N	726AT	LSP	20080131	0.00	146.80	13.80	Off many years
9N	726AT	LSP	20080206	0.00	146.80	13.80	Off many years
9N	726AT	LSP	20080213	0.00	146.80	13.80	
9N	726AT	LSP	20080221	0.00	146.80	13.80	
9N	726AT	LSP	20080227	0.00	146.80	13.80	Off many years
9N	726AT	LSP	20080312	0.00	146.80	13.80	Off many years
9N	726AT	LSP	20080402	0.00	146.80	13.80	Off Many Years
9N	726AT	LSP	20080408	0.00	146.80	13.80	
9N	726AT	LSP	20080416	0.00	146.80	13.80	
9N	726AT	LSP	20080430	0.00	146.80	13.80	
9N	726AT	LSP	20080514	0.00	146.80	13.80	
9N	726AT	LSP	20080521	0.00	146.80	13.80	
9N	726AT	LSP	20080630	0.00	146.80	14.00	
9N	726AT	LSP	20080714	0.00	146.80	14.00	
9N	726AT	LSP	20080717	0.00	146.80	13.80	
9N	726AT	LSP	20080723	0.00	146.80	13.80	
9N	726AT	LSP	20080812	0.00	146.80	13.80	
9N	726AT	LSP	20081030	0.00	146.80	13.80	Off many years
9N	726AT	LSP	20081210	0.00	146.80	13.80	off many years
9N	726AT	LSP	20081219	0.00	146.80	13.80	off many years
9N	726AT	LSP	20090106	0.00	146.80	13.80	Off many years
9N	726AT	LSP	20090114	0.00	146.80	13.80	OFF MANY YEARS
9N	726AT	LSP	20090130	0.00	146.80	13.80	
9N	726AT	LSP	20090203	0.00	146.80	13.80	Off many years.
9N	726AT	LSP	20090212	0.00	146.80	13.80	Off many years.
9N	726AT	LSP	20090226	0.00	146.80	13.80	Off many years.
9N	726AT	LSP	20090312	0.00	146.80	13.80	Off many years.
9N	726AT	LSP	20090318	0.00	146.80	13.80	Off for many years.
9N	726AT	LSP	20090325	0.00	146.80	13.80	
9N	726AT	LSP	20090401	0.00	146.80	13.80	Off for many yrs.
9N	726AT	LSP	20090408	0.00	146.80	13.80	Off for many years.
9N	726AT	LSP	20090416	0.00	146.80	13.80	Off for many years.
9N	726AT	LSP	20090604	0.00	146.80	13.80	Off for many years.
9N	726AT	LSP	20090611	0.00	146.80	13.80	Off for many years.
9N	726AT	LSP	20090701	0.00	146.80		
9N	726AT	LSP	20090716	0.00	146.80	13.80	Off for many years
9N	726AT	LSP	20090722	0.00	146.80	13.80	Off for many yrs.
9N	726AT	LSP	20090812	0.00	146.80	13.80	Off for many yrs.
9N	726AT	LSP	20090826	0.00	146.80	114.80	Off for many years.
9N	726AT	LSP	20090917	0.00	146.80	13.80	Off for many yrs

9N	726AT	LSP	20090925	0.00	146.80	103.80	Off for many years.
9N	726AT	LSP	20091029	0.00	146.80	13.80	
9N	726AT	LSP	20091202	0.00	146.80	13.80	Off for many years.
9N	726AT	LSP	20091223	0.00	146.80		Off many years
9N	726AT	LSP	20100211	0.00	146.80	13.80	Off for many years
9N	726AT	LSP	20100218	0.00	146.80	13.80	Off for many years
9N	726AT	LSP	20100317	0.00	146.80		
9N	726AT	LSP	20100421	0.00	146.80	13.80	Off for many years
9N	726AT	LSP	20100526	0.00	146.80		
9N	726AT	LSP	20100616	0.00	146.80	13.80	
9N	726AT	LSP	20100719	0.00	146.80	13.80	
9N	726AT	LSP	20100812	0.00	146.80	13.80	Off for many yrs
9N	726AT	LSP	20100915	0.00	146.80	13.80	No Base Plate
9N	726AT	LSP	20101020	0.00	146.80	13.80	No Base Plate
9N	726AT	LSP	20101123	0.00	146.80	13.80	No Base Plate
9N	726AT	LSP	20110106	0.00	146.80	13.80	No Base Plate
9N	726AT	LSP	20110202	0.00	146.80	13.80	No Base Plate
9N	726AT	LSP	20110317	0.00	146.80	13.80	No Base Plate
9N	726AT	LSP	20110418	0.00	146.80	13.80	No Base Plate
9N	726AT	LSP	20110518	0.00	146.80	13.80	No Base Plate
9N	726AT	LSP	20110707	0.00	146.80	13.80	No Base Plate
9N	726AT	LSP	20110726	0.00	146.80	13.80	No Base Plate
9N	726AT	LSP	20110825	0.00	146.80	13.80	No Base Plate
9N	726AT	LSP	20110928	0.00	146.80		No Base Plate
9N	726AT	LSP	20111018	0.00	146.80		No Base Plate
9N	726AT	LSP	20111130	0.00	146.80		No Base Plate
9N	726AT	LSP	20111221	0.00	146.80		
9N	726AT	LSP	20120206	0.00	146.80		No Base Plate
9N	726AT	LSP	20120313	0.00	146.80		No Base Plate
9N	726AT	LSP	20120404	0.00	146.80		No Base Plate
9N	726AT	LSP	20120424	0.00	146.80		No Base Plate
9N	726AT	LSP	20120620	0.00	146.80		No Base Plate
9N	726AT	LSP	20120822	0.00	146.80		No Base Plate
9N	726AT	LSP	20121011	0.00	146.80		No Base Plate
9N	726AT	LSP	20121128	0.00	146.80		No Base Plate
9N	726AT	LSP	20130128	0.00	146.80		No Base Plate
9N	726AT	LSP	20130325	0.00	146.80		No Base Plate
9N	726AT	LSP	20130430	0.00	146.80		No Base Plate
9N	726AT	LSP	20130605	0.00	146.80		No Base Plate
9N	726AT	LSP	20130717	0.00	146.80		No Base Plate
9N	726AT	LSP	20130828	0.00	146.80		No Base Plate
9N	726AT	LSP	20131003	0.00	146.80		No Base Plate
9N	726AT	LSP	20131107	0.00	146.80		No Base Plate
9N	726AT	LSP	20131210	0.00	146.80		No Base Plate
9N	726AT	LSP	20140312	0.00	146.80		No Base Plate

## LACFCD Seawater Barrier database: Historical Injection Rate Information - Well 9R

PROJ	FCD	AQUIF	Date	Q (CFS)	RP_EL	ELEV	REMARKS
9R	726AW	LSP	19650812.00	0.00	144.20	0.00	NO3 LINE FAILED
9R	726AW	LSP	19651028.00	0.00	144.20	0.00	PACKER FAILED
9R	726AW	LSP	19661017.00	0.00	144.20	0.00	REDEVELOPMENT
9R	726AW	LSP	19661028.00	0.00	144.20	9.20	REDEVELOPMENT
9R	726AW	LSP	19661130.00	0.39	144.20	71.40	REDEV LAST MO
9R	726AW	LSP	19661230.00	0.60	144.20	107.20	
9R	726AW	LSP	19670126.00	0.62	144.20	49.60	PRIOR ELEV FOAM
9R	726AW	LSP	19670216.00	0.66	144.20	51.20	
9R	726AW	LSP	19670228.00	0.65	144.20	51.60	
9R	726AW	LSP	19670314.00	0.68	144.20	51.10	
9R	726AW	LSP	19670330.00	0.65	144.20	54.60	
9R	726AW	LSP	19670413.00	0.66	144.20	55.20	
9R	726AW	LSP	19670427.00	0.65	144.20	55.60	
9R	726AW	LSP	19670511.00	0.65	144.20	55.80	
9R	726AW	LSP	19670531.00	0.65	144.20	62.60	
9R	726AW	LSP	19670615.00	0.62	144.20	72.50	
9R	726AW	LSP	19670629.00	0.62	144.20	80.40	
9R	726AW	LSP	19670713.00	0.62	144.20	84.90	
9R	726AW	LSP	19670727.00	0.61	144.20	79.60	
9R	726AW	LSP	19670817.00	0.62	144.20	78.20	
9R	726AW	LSP	19670831.00	0.60	144.20	79.90	
9R	726AW	LSP	19670914.00	0.00	144.20	85.60	
9R	726AW	LSP	19670928.00	0.59	144.20	83.50	
9R	726AW	LSP	19671011.00	0.59	144.20	80.00	
9R	726AW	LSP	19671026.00	0.60	144.20	82.60	
9R	726AW	LSP	19671116.00	0.59	144.20	81.60	
9R	726AW	LSP	19671128.00	0.57	144.20	80.80	
9R	726AW	LSP	19671214.00	0.54	144.20	81.80	
9R	726AW	LSP	19671228.00	0.55	144.20	83.10	
9R	726AW	LSP	19680118.00	0.57	144.20	83.60	
9R	726AW	LSP	19680125.00	0.56	144.20	84.50	
9R	726AW	LSP	19680215.00	0.53	144.20	85.70	
9R	726AW	LSP	19680229.00	0.52	144.20	83.70	
9R	726AW	LSP	19680314.00	0.55	144.20	58.00	
9R	726AW	LSP	19680328.00	0.54	144.20	83.80	
9R	726AW	LSP	19680411.00	0.55	144.20	84.60	
9R	726AW	LSP	19680430.00	0.55	144.20	90.80	
9R	726AW	LSP	19680516.00	0.52	144.20	97.50	
9R	726AW	LSP	19680529.00	0.51	144.20	100.50	
9R	726AW	LSP	19680613.00	0.52	144.20	102.40	
9R	726AW	LSP	19680627.00	0.52	144.20	109.50	
9R	726AW	LSP	19680711.00	0.51	144.20	106.70	
9R	726AW	LSP	19680731.00	0.53	144.20	105.60	
9R	726AW	LSP	19680815.00	0.52	144.20	102.10	
9R	726AW	LSP	19680829.00	0.56	144.20	101.30	



9R	726AW	LSP	19680912.00	0.52	144.20	98.90	
9R	726AW	LSP	19680927.00	0.00	144.20	-5.60	
9R	726AW	LSP	19681017.00	0.55	144.20	94.50	
9R	726AW	LSP	19681031.00	0.52	144.20	93.20	
9R	726AW	LSP	19681113.00	0.44	144.20	96.60	
9R	726AW	LSP	19681127.00	0.55	144.20	89.10	
9R	726AW	LSP	19681212.00	0.50	144.20	103.60	
9R	726AW	LSP	19681227.00	0.49	144.20	103.10	
9R	726AW	LSP	19690130.00	0.48	144.20	104.60	
9R	726AW	LSP	19690227.00	0.45	144.20	112.60	
9R	726AW	LSP	19690327.00	0.45	144.20	125.10	
9R	726AW	LSP	19690429.00	0.42	144.20	133.10	
9R	726AW	LSP	19690528.00	0.42	144.20	121.50	
9R	726AW	LSP	19690626.00	0.42	144.20	128.20	
9R	726AW	LSP	19690730.00	0.43	144.20	129.20	
9R	726AW	LSP	19690828.00	0.41	144.20	120.70	
9R	726AW	LSP	19690930.00	0.40	144.20	144.20	
9R	726AW	LSP	19691030.00	0.40	144.20	144.20	
9R	726AW	LSP	19691118.00	0.00	144.20	0.00	L S P TEST
9R	726AW	LSP	19691126.00	0.37	144.20	116.70	
9R	726AW	LSP	19691230.00	0.38	144.20	119.10	
9R	726AW	LSP	19700129.00	0.35	144.20	138.50	
9R	726AW	LSP	19700226.00	0.32	144.20	137.00	
9R	726AW	LSP	19700326.00	0.35	144.20	144.20	
9R	726AW	LSP	19700429.00	0.31	144.20	129.30	
9R	726AW	LSP	19700528.00	0.31	144.20	117.30	
9R	726AW	LSP	19700620.00	0.00	144.20	0.00	REPLACE N2 LINE
9R	726AW	LSP	19700625.00	0.00	144.20	-2.80	ACKER PROB.
9R	726AW	LSP	19700730.00	0.40	144.20	102.50	
9R	726AW	LSP	19700827.00	0.41	144.20	106.30	
9R	726AW	LSP	19701001.00	0.37	144.20	139.90	
9R	726AW	LSP	19701029.00	0.50	144.20	162.70	
9R	726AW	LSP	19701125.00	0.52	144.20	151.10	
9R	726AW	LSP	19701215.00	0.00	144.20	0.00	BROKEN CONDUCT
9R	726AW	LSP	19701230.00	0.48	144.20	130.00	
9R	726AW	LSP	19710128.00	0.47	144.20	134.10	
9R	726AW	LSP	19710225.00	0.48	144.20	128.90	
9R	726AW	LSP	19710330.00	0.45	144.20	144.50	
9R	726AW	LSP	19710429.00	0.43	144.20	151.50	
9R	726AW	LSP	19710527.00	0.45	144.20	153.70	
9R	726AW	LSP	19710630.00	0.48	144.20	141.90	
9R	726AW	LSP	19710729.00	0.48	144.20	144.20	
9R	726AW	LSP	19710826.00	0.43	144.20	164.90	
9R	726AW	LSP	19710930.00	0.39	144.20	185.70	
9R	726AW	LSP	19711028.00	0.29	144.20	190.40	
9R	726AW	LSP	19711123.00	0.36	144.20	176.50	
9R	726AW	LSP	19711229.00	0.34	144.20	168.40	

9R	726AW	LSP	19720131.00	0.00	144.20	0.00	UNABLE TO MEAS.
9R	726AW	LSP	19720224.00	0.32	144.20	111.60	
9R	726AW	LSP	19720330.00	0.36	144.20	117.20	
9R	726AW	LSP	19720427.00	0.38	144.20	123.40	
9R	726AW	LSP	19720601.00	0.38	144.20	132.20	
9R	726AW	LSP	19720629.00	0.40	144.20	133.90	
9R	726AW	LSP	19720712.00	0.00	144.20	0.00	REPLACE TUBE
9R	726AW	LSP	19720727.00	0.39	144.20	118.10	
9R	726AW	LSP	19720831.00	0.36	144.20	128.60	
9R	726AW	LSP	19720928.00	0.37	144.20	122.30	
9R	726AW	LSP	19721030.00	0.31	144.20	106.80	
9R	726AW	LSP	19721130.00	0.31	144.20	102.60	
9R	726AW	LSP	19721227.00	0.32	144.20	100.30	
9R	726AW	LSP	19730201.00	0.15	144.20	120.20	
9R	726AW	LSP	19730228.00	0.16	144.20	120.10	
9R	726AW	LSP	19730329.00	0.21	144.20	137.20	
9R	726AW	LSP	19730425.00	0.21	144.20	132.70	
9R	726AW	LSP	19730531.00	0.21	144.20	137.20	
9R	726AW	LSP	19730628.00	0.22	144.20	138.40	
9R	726AW	LSP	19730726.00	0.21	144.20	126.10	
9R	726AW	LSP	19730829.00	0.21	144.20	121.50	
9R	726AW	LSP	19730927.00	0.18	144.20	119.20	
9R	726AW	LSP	19731030.00	0.20	144.20	140.60	
9R	726AW	LSP	19731129.00	0.20	144.20	136.10	
9R	726AW	LSP	19731228.00	0.21	144.20	141.10	
9R	726AW	LSP	19740131.00	0.21	144.20	140.70	
9R	726AW	LSP	19740301.00	0.15	144.20	142.10	
9R	726AW	LSP	19740328.00	0.22	144.20	142.70	
9R	726AW	LSP	19740501.00	0.00	144.20	0.00	NO MEAS. TAKEN
9R	726AW	LSP	19740607.00	0.22	144.20	123.90	
9R	726AW	LSP	19740627.00	0.21	144.20	128.10	
9R	726AW	LSP	19740708.00	0.00	144.20	0.00	REDEVELOPMENT
9R	726AW	LSP	19740801.00	0.47	144.20	49.20	
9R	726AW	LSP	19740829.00	0.46	144.20	47.10	
9R	726AW	LSP	19740903.00	0.00	144.20	0.00	INST LATERAL
9R	726AW	LSP	19741003.00	0.00	144.20	-11.30	
9R	726AW	LSP	19741031.00	0.45	144.20	53.40	
9R	726AW	LSP	19741127.00	0.48	144.20	58.90	
9R	726AW	LSP	19741202.00	0.00	144.20	0.00	MWD PRESS TEST
9R	726AW	LSP	19741231.00	0.38	144.20	78.20	
9R	726AW	LSP	19750130.00	0.38	144.20	79.20	
9R	726AW	LSP	19750227.00	0.39	144.20	81.20	
9R	726AW	LSP	19750327.00	0.38	144.20	81.40	
9R	726AW	LSP	19750501.00	0.41	144.20	76.20	
9R	726AW	LSP	19750530.00	0.40	144.20	57.00	
9R	726AW	LSP	19750610.00	0.00	144.20	0.00	REPAIR TUBE
9R	726AW	LSP	19750626.00	0.32	144.20	97.20	

9R	726AW	LSP	19750731.00	0.32	144.20	96.20	
9R	726AW	LSP	19750828.00	0.00	144.20	-11.90	RUPTURED LINE
9R	726AW	LSP	19751002.00	0.24	144.20	59.20	
9R	726AW	LSP	19751030.00	0.42	144.20	82.20	
9R	726AW	LSP	19751126.00	0.40	144.20	121.40	
9R	726AW	LSP	19760102.00	0.40	144.20	123.30	
9R	726AW	LSP	19760129.00	0.40	144.20	122.40	
9R	726AW	LSP	19760226.00	0.39	144.20	120.40	
9R	726AW	LSP	19760401.00	0.41	144.20	116.10	
9R	726AW	LSP	19760429.00	0.35	144.20	101.10	
9R	726AW	LSP	19760527.00	0.32	144.20	95.00	
9R	726AW	LSP	19760701.00	0.30	144.20	109.30	
9R	726AW	LSP	19760729.00	0.30	144.20	113.70	
9R	726AW	LSP	19760902.00	0.30	144.20	116.20	
9R	726AW	LSP	19761001.00	0.30	144.20	112.60	
9R	726AW	LSP	19761028.00	0.31	144.20	106.70	
9R	726AW	LSP	19761124.00	0.15	144.20	79.30	ZONE SEPARATION
9R	726AW	LSP	19761230.00	0.30	144.20	105.10	
9R	726AW	LSP	19770127.00	0.30	144.20	105.10	
9R	726AW	LSP	19770303.00	0.30	144.20	96.20	
9R	726AW	LSP	19770331.00	0.30	144.20	98.20	
9R	726AW	LSP	19770428.00	0.30	144.20	98.00	
9R	726AW	LSP	19770603.00	0.30	144.20	104.70	
9R	726AW	LSP	19770630.00	0.35	144.20	106.30	
9R	726AW	LSP	19770728.00	0.30	144.20	123.00	
9R	726AW	LSP	19770901.00	0.30	144.20	112.70	
9R	726AW	LSP	19770929.00	0.30	144.20	113.50	
9R	726AW	LSP	19771027.00	0.30	144.20	114.20	
9R	726AW	LSP	19771201.00	0.31	144.20	116.50	
9R	726AW	LSP	19771229.00	0.32	144.20	118.80	
9R	726AW	LSP	19780126.00	0.30	144.20	120.40	
9R	726AW	LSP	19780224.00	0.30	144.20	123.50	
9R	726AW	LSP	19780330.00	0.30	144.20	126.00	
9R	726AW	LSP	19780427.00	0.29	144.20	131.80	
9R	726AW	LSP	19780601.00	0.20	144.20	132.30	
9R	726AW	LSP	19780629.00	0.10	144.20	130.70	
9R	726AW	LSP	19780727.00	0.10	144.20	134.50	
9R	726AW	LSP	19780831.00	0.28	144.20	122.20	
9R	726AW	LSP	19780928.00	0.29	144.20	104.50	
9R	726AW	LSP	19781102.00	0.30	144.20	106.20	
9R	726AW	LSP	19781130.00	0.30	144.20	102.00	
9R	726AW	LSP	19781228.00	0.31	144.20	111.90	
9R	726AW	LSP	19790201.00	0.32	144.20	104.40	
9R	726AW	LSP	19790301.00	0.37	144.20	117.40	
9R	726AW	LSP	19790329.00	0.34	144.20	132.40	
9R	726AW	LSP	19790426.00	0.32	144.20	136.20	
9R	726AW	LSP	19790524.00	0.32	144.20	144.20	

9R	726AW	LSP	19790529.00	0.00	144.20	0.00	TIE IN SEGMENT
9R	726AW	LSP	19790702.00	0.00	144.20	7.40	
9R	726AW	LSP	19790718.00	0.34	144.20	119.20	
9R	726AW	LSP	19790828.00	0.32	144.20	126.40	
9R	726AW	LSP	19790925.00	0.33	144.20	141.00	
9R	726AW	LSP	19791030.00	0.30	144.20	144.20	
9R	726AW	LSP	19791127.00	0.33	144.20	144.20	
9R	726AW	LSP	19791226.00	0.35	144.20	144.20	
9R	726AW	LSP	19800201.00	0.35	144.20	112.60	
9R	726AW	LSP	19800226.00	0.35	144.20	101.50	
9R	726AW	LSP	19800325.00	0.30	144.20	154.60	
9R	726AW	LSP	19800429.00	0.30	144.20	155.70	
9R	726AW	LSP	19800528.00	0.30	144.20	148.80	
9R	726AW	LSP	19800624.00	0.32	144.20	144.20	
9R	726AW	LSP	19800805.00	0.38	144.20	102.50	
9R	726AW	LSP	19800902.00	0.40	144.20	73.30	
9R	726AW	LSP	19800930.00	0.38	144.20	163.80	
9R	726AW	LSP	19801028.00	0.31	144.20	146.50	
9R	726AW	LSP	19801125.00	0.30	144.20	153.40	
9R	726AW	LSP	19801230.00	0.29	144.20	151.10	
9R	726AW	LSP	19810127.00	0.29	144.20	148.80	
9R	726AW	LSP	19810224.00	0.28	144.20	141.60	
9R	726AW	LSP	19810324.00	0.31	144.20	127.90	
9R	726AW	LSP	19810428.00	0.29	144.20	127.40	
9R	726AW	LSP	19810527.00	0.25	144.20	126.50	
9R	726AW	LSP	19810630.00	0.29	144.20	158.50	
9R	726AW	LSP	19810717.00	0.00	144.20	0.00	REPLACE VALVE
9R	726AW	LSP	19810730.00	0.00	144.20	-4.10	SEE NOTE 2
9R	726AW	LSP	19810825.00	0.20	144.20	106.60	
9R	726AW	LSP	19810929.00	0.24	144.20	90.50	
9R	726AW	LSP	19811028.00	0.30	144.20	108.10	
9R	726AW	LSP	19811124.00	0.31	144.20	109.10	
9R	726AW	LSP	19811222.00	0.25	144.20	148.80	
9R	726AW	LSP	19820126.00	0.27	144.20	105.70	
9R	726AW	LSP	19820224.00	0.40	144.20	158.10	
9R	726AW	LSP	19820407.00	0.39	144.20	125.30	
9R	726AW	LSP	19820504.00	0.25	144.20	146.50	
9R	726AW	LSP	19820602.00	0.48	144.20	171.80	
9R	726AW	LSP	19820630.00	0.34	144.20	204.70	
9R	726AW	LSP	19820728.00	0.37	144.20	190.40	
9R	726AW	LSP	19820909.00	0.33	144.20	204.20	
9R	726AW	LSP	19820921.00	0.32	144.20	204.20	
9R	726AW	LSP	19821102.00	0.35	144.20	206.50	
9R	726AW	LSP	19821202.00	0.33	144.20	208.80	
9R	726AW	LSP	19830103.00	0.40	144.20	146.50	
9R	726AW	LSP	19830128.00	0.35	144.20	169.50	
9R	726AW	LSP	19830225.00	0.35	144.20	162.70	

9R	726AW	LSP	19830330.00	0.38	144.20	185.70	
9R	726AW	LSP	19830406.00	0.00	144.20	0.00	REDEVELOP PRBLS
9R	726AW	LSP	19830429.00	0.00	144.20	0.00	NO MEAS
9R	726AW	LSP	19830526.00	0.00	144.20	0.00	NO MEAS
9R	726AW	LSP	19830624.00	0.00	144.20	0.00	NO MEAS
9R	726AW	LSP	19830722.00	0.00	144.20	0.00	NO MEAS
9R	726AW	LSP	19830902.00	0.00	144.20	0.00	NO MEAS
9R	726AW	LSP	19830929.00	0.00	144.20	0.00	NO MEAS
9R	726AW	LSP	19831028.00	0.00	144.20	0.00	CASING DMG
9R	726AW	LSP	19831208.00	0.00	144.20	0.00	NO MEAS
9R	726AW	LSP	19840106.00	0.00	144.20	0.00	NO MEAS
9R	726AW	LSP	19840202.00	0.00	144.20	0.00	NO MEAS
9R	726AW	LSP	19840302.00	0.00	144.20	0.00	NO MEAS
9R	726AW	LSP	19840328.00	0.00	144.20	0.00	NO MEAS
9R	726AW	LSP	19840425.00	0.00	144.20	0.00	NO MEAS
9R	726AW	LSP	19840523.00	0.00	144.20	0.00	NO MEAS
9R	726AW	LSP	19840628.00	0.00	144.20	0.00	NO MEAS
9R	726AW	LSP	19840724.00	0.00	144.20	0.00	NO MEAS
9R	726AW	LSP	19840829.00	0.00	144.20	11.60	CASING DAMAGE
9R	726AW	LSP	19840926.00	0.00	144.20	12.20	DAMAGED CASING
9R	726AW	LSP	19841030.00	0.00	144.20	11.50	DAMAGED CASING
9R	726AW	LSP	19841129.00	0.00	144.20	10.90	DAMAGED CASING
9R	726AW	LSP	19841227.00	0.00	144.20	11.10	DAMAGED CASING
9R	726AW	LSP	19850130.00	0.00	144.20	11.20	DAMAGED CASING
9R	726AW	LSP	19850227.00	0.00	144.20	11.60	DAMAGED CASING
9R	726AW	LSP	19850328.00	0.00	144.20	10.30	DAMAGED CASING
9R	726AW	LSP	19850424.00	0.00	144.20	10.60	DAMAGED CASING
9R	726AW	LSP	19850530.00	0.00	144.20	10.90	DAMAGED CASING
9R	726AW	LSP	19850626.00	0.00	144.20	11.00	DAMAGED CASING
9R	726AW	LSP	19850730.00	0.00	144.20	11.00	DAMAGED CASING
9R	726AW	LSP	19850828.00	0.00	144.20	10.20	DAMAGED CASING
9R	726AW	LSP	19851001.00	0.00	144.20	5.20	
9R	726AW	LSP	19851031.00	0.00	144.20	3.20	
9R	726AW	LSP	19851204.00	0.00	144.20	7.70	DAMAGED CASING
9R	726AW	LSP	19860102.00	0.00	144.20	8.10	DAMAGED CASING
9R	726AW	LSP	19860129.00	0.00	144.20	8.20	DAMAGED CASING
9R	726AW	LSP	19860227.00	0.00	144.20	8.90	DAMAGED CASING
9R	726AW	LSP	19860402.00	0.00	144.20	8.20	DAMAGED CASING
9R	726AW	LSP	19860501.00	0.00	144.20	7.00	DAMAGED CASING
9R	726AW	LSP	19860529.00	0.00	144.20	7.70	DAMAGED CASING
9R	726AW	LSP	19860703.00	0.00	144.20	8.80	DAMAGED CASING
9R	726AW	LSP	19860731.00	0.00	144.20	9.50	DAMAGED CASING
9R	726AW	LSP	19860827.00	0.00	144.20	9.50	DAMAGED CASING
9R	726AW	LSP	19861001.00	0.00	144.20	9.60	DAMAGED SLEEVE
9R	726AW	LSP	19861030.00	0.00	144.20	9.60	DAMAGED SLEEVE
9R	726AW	LSP	19861125.00	0.00	144.20	10.20	DAMAGED SLEEVE
9R	726AW	LSP	19861231.00	0.00	144.20	10.60	DAMAGED SLEEVE

9R	726AW	LSP	19870130.00	0.00	144.20	10.40	DAMAGED SLEEVE
9R	726AW	LSP	19870225.00	0.00	144.20	10.60	DAMAGED SLEEVE
9R	726AW	LSP	19870401.00	0.00	144.20	10.70	DAMAGED SLEEVE
9R	726AW	LSP	19870429.00	0.00	144.20	10.50	DAMAGED SLEEVE
9R	726AW	LSP	19870527.00	0.00	144.20	10.70	DAMAGED SLEEVE
9R	726AW	LSP	19870701.00	0.00	144.20	13.40	DAMAGED SLEEVE
9R	726AW	LSP	19870730.00	0.00	144.20	13.10	DAMAGED SLEEVE
9R	726AW	LSP	19870828.00	0.00	144.20	12.90	DAMAGED SLEEVE
9R	726AW	LSP	19870930.00	0.00	144.20	13.10	DAMAGED SLEEVE
9R	726AW	LSP	19871028.00	0.00	144.20	13.10	DAMAGED SLEEVE
9R	726AW	LSP	19871125.00	0.00	144.20	13.50	DAMAGED SLEEVE
9R	726AW	LSP	19871229.00	0.00	144.20	13.40	DAMAGED SLEEVE
9R	726AW	LSP	19880127.00	0.00	144.20	13.30	DAMAGED SLEEVE
9R	726AW	LSP	19880223.00	0.00	144.20	14.50	DAMAGED SLEEVE
9R	726AW	LSP	19880330.00	0.00	144.20	14.00	DAMAGED SLEEVE
9R	726AW	LSP	19880426.00	0.00	144.20	13.60	DAMAGED SLEEVE
9R	726AW	LSP	19880524.00	0.00	144.20	13.90	DAMAGED SLEEVE
9R	726AW	LSP	19880629.00	0.00	144.20	13.60	DAMAGED SLEEVE
9R	726AW	LSP	19880727.00	0.00	144.20	13.40	DAMAGED SLEEVE
9R	726AW	LSP	19880830.00	0.00	144.20	14.20	DAMAGED SLEEVE
9R	726AW	LSP	19880929.00	0.00	144.20	14.30	DAMAGED SLEEVE
9R	726AW	LSP	19881025.00	0.00	144.20	13.60	DAMAGED SLEEVE
9R	726AW	LSP	19881130.00	0.00	144.20	12.60	DAMAGED SLEEVE
9R	726AW	LSP	19881229.00	0.00	144.20	13.40	DAMAGED SLEEVE
9R	726AW	LSP	19890126.00	0.00	144.20	13.20	DAMAGED SLEEVE
9R	726AW	LSP	19890223.00	0.00	144.20	12.70	DAMAGED SLEEVE
9R	726AW	LSP	19890329.00	0.00	144.20	13.40	DAMAGED SLEEVE
9R	726AW	LSP	19890504.00	0.00	144.20	12.70	DAMAGED SLEEVE
9R	726AW	LSP	19890601.00	0.00	144.20	13.50	DAMAGED SLEEVE
9R	726AW	LSP	19890628.00	0.00	144.20	12.70	REPAIR
9R	726AW	LSP	19890802.00	0.00	144.20	13.70	REPAIR
9R	726AW	LSP	19890830.00	0.00	144.20	0.00	REPAIR
9R	726AW	LSP	19890928.00	0.00	144.20	13.20	REPAIR
9R	726AW	LSP	19891102.00	0.00	144.20	11.30	REPAIR
9R	726AW	LSP	19891129.00	0.00	144.20	11.10	REPAIR
9R	726AW	LSP	19900103.00	0.00	144.20	11.60	REPAIR
9R	726AW	LSP	19900131.00	0.00	144.20	11.40	REPAIR
9R	726AW	LSP	19900228.00	0.00	144.20	11.50	REPAIR
9R	726AW	LSP	19900405.00	0.00	144.20	11.90	REPAIR
9R	726AW	LSP	19900503.00	0.00	144.20	11.30	REPAIR
9R	726AW	LSP	19900601.00	0.00	144.20	11.20	REPAIR
9R	726AW	LSP	19900705.00	0.00	144.20	11.50	REPAIR
9R	726AW	LSP	19900801.00	0.00	144.20	12.10	REPAIR
9R	726AW	LSP	19900830.00	0.00	144.20	11.80	REPAIR
9R	726AW	LSP	19901003.00	0.00	144.20	12.20	REPAIR
9R	726AW	LSP	19901031.00	0.00	144.20	11.50	REPAIR
9R	726AW	LSP	19901205.00	0.00	144.20	12.00	REPAIR

9R	726AW	LSP	19901228.00	0.00	144.20	11.90	REPAIR
9R	726AW	LSP	19910130.00	0.00	144.20	11.40	REPAIR
9R	726AW	LSP	19910227.00	0.00	144.20	11.60	REPAIR
9R	726AW	LSP	19910403.00	0.00	144.20	11.80	REPAIR
9R	726AW	LSP	19910501.00	0.00	144.20	11.40	REPAIR
9R	726AW	LSP	19910612.00	0.00	144.20	6.20	
9R	726AW	LSP	19910714.00	0.00	144.20	4.90	MEASURED 910717
9R	726AW	LSP	19910807.00	0.00	144.20	4.90	OFF FOR CONSTR.
9R	726AW	LSP	19910906.00	0.00	144.20	8.30	REPAIR
9R	726AW	LSP	19911003.00	0.00	144.20	8.60	REPAIR
9R	726AW	LSP	19911031.00	0.00	144.20	10.00	REPAIR
9R	726AW	LSP	19911127.00	0.00	144.20	10.60	REPAIR
9R	726AW	LSP	19911227.00	0.00	144.20	14.20	REPAIR
9R	726AW	LSP	19920127.00	0.00	144.20	11.80	REPAIR
9R	726AW	LSP	19920227.00	0.00	144.20	11.90	REPAIR
9R	726AW	LSP	19920408.00	0.00	144.20	9.20	REPAIR
9R	726AW	LSP	19920429.00	0.00	144.20	11.20	REPAIR
9R	726AW	LSP	19920604.00	0.00	144.20	11.50	REPAIR
9R	726AW	LSP	19920701.00	0.00	144.20	11.00	REPAIR
9R	726AW	LSP	19920805.00	0.00	144.20	11.70	REPAIR
9R	726AW	LSP	19920902.00	0.00	144.20	11.00	REPAIR
9R	726AW	LSP	19921002.00	0.00	144.20	12.20	REPAIR
9R	726AW	LSP	19921028.00	0.00	144.20	12.20	REPAIR
9R	726AW	LSP	19921203.00	0.00	144.20	11.20	REPAIR
9R	726AW	LSP	19921217.00	0.00	144.20	11.60	REPAIR
9R	726AW	LSP	19930128.00	0.00	144.20	12.80	REPAIR
9R	726AW	LSP	19930224.00	0.00	144.20	6.30	REPAIR
9R	726AW	LSP	19930331.00	0.00	144.20	8.10	REPAIR
9R	726AW	LSP	19930428.00	0.00	144.20	12.10	REPAIR
9R	726AW	LSP	19930603.00	0.00	144.20	12.70	REPAIR
9R	726AW	LSP	19930630.00	0.00	144.20	13.00	REPAIR
9R	726AW	LSP	19930728.00	0.00	144.20	12.60	REPAIR
9R	726AW	LSP	19930826.00	0.00	144.20	13.40	REPAIR
9R	726AW	LSP	19931001.00	0.00	144.20	12.40	REPAIR
9R	726AW	LSP	19931027.00	0.00	144.20	12.20	REPAIR
9R	726AW	LSP	19931124.00	0.00	144.20	12.20	REPAIR
9R	726AW	LSP	19931227.00	0.00	144.20	10.90	REPAIR
9R	726AW	LSP	19940127.00	0.00	144.20	10.70	REPAIR
9R	726AW	LSP	19940302.00	0.00	144.20	10.70	REPAIR
9R	726AW	LSP	19940323.00	0.00	144.20	10.70	REPAIR
9R	726AW	LSP	19940423.00	0.00	144.20	5.40	OFF
9R	726AW	LSP	19940523.00	0.00	144.20	5.40	OFF
9R	726AW	LSP	19940706.00	0.00	144.20	7.20	REPAIR
9R	726AW	LSP	19940803.00	0.00	144.20	7.20	REPAIR
9R	726AW	LSP	19940902.00	0.00	144.20	8.20	REPAIR
9R	726AW	LSP	19940929.00	0.00	144.20	9.80	REPAIR
9R	726AW	LSP	19941026.00	0.00	144.20	10.00	REPAIR

9R	726AW	LSP	19941130.00	0.00	144.20	10.20	REPAIR
9R	726AW	LSP	19941229.00	0.00	144.20	10.20	REPAIR
9R	726AW	LSP	19950426.00	0.00	144.20	8.40	REPAIR
9R	726AW	LSP	19950601.00	0.00	144.20	9.40	REPAIR
9R	726AW	LSP	19950628.00	0.00	144.20	9.70	REPAIR
9R	726AW	LSP	19950726.00	0.00	144.20	10.10	REPAIR
9R	726AW	LSP	19950901.00	0.00	144.20	9.70	REPAIR
9R	726AW	LSP	19950920.00	0.00	144.20	10.20	REPAIR
9R	726AW	LSP	19951101.00	0.00	144.20	0.00	REPAIR
9R	726AW	LSP	19960110.00	0.00	144.20	7.30	REPAIR
9R	726AW	LSP	19960208.00	0.00	144.20	7.80	REPAIR
9R	726AW	LSP	19960307.00	0.00	144.20	8.30	REPAIR
9R	726AW	LSP	19960403.00	0.00	144.20	9.50	REPAIR
9R	726AW	LSP	19960509.00	0.00	144.20	10.20	REPAIR
9R	726AW	LSP	19960829.00	0.00	144.20	11.20	
9R	726AW	LSP	19961106.00	0.00	144.20	19.20	
9R	726AW	LSP	19970106.00	0.00	144.20	10.20	
9R	726AW	LSP	19970131.00	0.00	144.20	10.20	
9R	726AW	LSP	19970205.00	0.00	144.20	11.20	
9R	726AW	LSP	19970304.00	0.00	144.20	11.20	
9R	726AW	LSP	19970306.00	0.00	144.20	10.20	
9R	726AW	LSP	19970325.00	0.00	144.20	10.90	
9R	726AW	LSP	19970417.00	0.00	144.20	11.00	Repair, dmdg sle
9R	726AW	LSP	19970515.00	0.00	144.20	9.50	Repair, dmdg sle
9R	726AW	LSP	19970604.00	0.00	144.20	10.20	Repair, dmdg sle
9R	726AW	LSP	19970610.00	0.00	144.20	10.20	Repair, dmdg sle
9R	726AW	LSP	19970618.00	0.00	144.20	10.20	Repair, dmdg sle
9R	726AW	LSP	19970626.00	0.00	144.20	9.20	Repair, dmdg sle
9R	726AW	LSP	19970707.00	0.00	144.20	9.20	Repair, dmdg sle
9R	726AW	LSP	19970717.00	0.00	144.20	10.20	Repair, dmdg sle
9R	726AW	LSP	19970722.00	0.00	144.20	10.20	Repair, dmdg sle
9R	726AW	LSP	19970813.00	0.00	144.20	10.20	Repair, dmdg sle
9R	726AW	LSP	19970904.00	0.00	144.20	10.20	Repair, dmdg sle
9R	726AW	LSP	19970912.00	0.00	144.20	12.20	Repair, dmdg sle
9R	726AW	LSP	19970922.00	0.00	144.20	10.20	Repair, dmdg sle
9R	726AW	LSP	19971002.00	0.00	144.20	15.20	Repair, dmdg sle
9R	726AW	LSP	19971009.00	0.00	144.20	11.40	Repair, dmdg sle
9R	726AW	LSP	19971022.00	0.00	144.20	13.20	Repair, dmdg sle
9R	726AW	LSP	19971028.00	0.00	144.20	13.40	Repair, dmdg sle
9R	726AW	LSP	19971105.00	0.00	144.20	9.20	Repair, dmdg sle
9R	726AW	LSP	19971120.00	0.00	144.20	9.60	Repair, dmdg sle
9R	726AW	LSP	19971203.00	0.00	144.20	11.70	Repair, dmdg sle
9R	726AW	LSP	19971210.00	0.00	144.20	11.20	Repair, dmdg sle
9R	726AW	LSP	19971231.00	0.00	144.20	12.20	Repair, dmdg sle
9R	726AW	LSP	19980108.00	0.00	144.20	11.20	Repair, dmdg sle
9R	726AW	LSP	19980116.00	0.00	144.20	11.40	Repair, dmdg sle
9R	726AW	LSP	19980121.00	0.00	144.20	11.20	Repair, dmdg sle



9R	726AW	LSP	19980128.00	0.00	144.20	11.20	Repair, dmdg sle
9R	726AW	LSP	19980304.00	0.00	144.20	11.40	Repair, dmdg sle
9R	726AW	LSP	19980319.00	0.00	144.20	12.20	Repair, dmdg sle
9R	726AW	LSP	19980331.00	0.00	144.20	12.20	Repair, dmdg sle
9R	726AW	LSP	19980430.00	0.00	144.20	12.20	Repair, dmdg sleeve
9R	726AW	LSP	19980526.00	0.00	144.20	12.08	Repair, dmdg sleeve
9R	726AW	LSP	19990817.00	0.00	144.20	13.20	Repair, dmdg sleeve
9R	726AW	LSP	20000508.00	0.00	144.20	11.40	Repair, dmdg sleeve
9R	726AW	LSP	20010308.00	0.00	144.20	12.20	Repair, dmdg sleeve
9R	726AW	LSP	20010314.00	0.00	144.20	12.40	Repair, dmdg sleeve
9R	726AW	LSP	20010321.00	0.00	144.20	12.50	Repair, dmdg sleeve
9R	726AW	LSP	20010404.00	0.00	144.20	12.50	Repair, dmdg sleeve
9R	726AW	LSP	20010411.00	0.00	144.20	12.80	Repair, dmdg sleeve
9R	726AW	LSP	20010419.00	0.00	144.20	11.90	Repair, dmdg sleeve
9R	726AW	LSP	20010503.00	0.00	144.20	12.90	Repair, dmdg sleeve
9R	726AW	LSP	20010509.00	0.00	144.20	13.20	Repair, dmdg sleeve
9R	726AW	LSP	20010518.00	0.00	144.20	4.20	Repair, dmdg sleeve
9R	726AW	LSP	20010531.00	0.00	144.20	4.20	Repair, dmdg sleeve
9R	726AW	LSP	20010606.00	0.00	144.20	4.20	Repair, dmdg sleeve
9R	726AW	LSP	20010613.00	0.00	144.20	4.20	Repair, dmdg sleeve
9R	726AW	LSP	20010705.00	0.00	144.20	4.20	Repair, dmdg sleeve
9R	726AW	LSP	20010725.00	0.00	144.20	4.20	Repair, dmdg sleeve
9R	726AW	LSP	20010810.00	0.00	144.20	4.20	Repair, dmdg sleeve
9R	726AW	LSP	20010926.00	0.00	144.20	4.20	Repair, dmdg sleeve
9R	726AW	LSP	20011011.00	0.00	144.20	4.20	Repair, dmdg sleeve
9R	726AW	LSP	20011023.00	0.00	144.20	4.20	Repair, dmdg sleeve
9R	726AW	LSP	20011031.00	0.00	144.20	4.20	Repair, dmdg sleeve
9R	726AW	LSP	20011107.00	0.00	144.20	4.20	Repair, dmdg sleeve
9R	726AW	LSP	20011204.00	0.00	144.20	13.80	Repair, dmdg sleeve
9R	726AW	LSP	20011210.00	0.00	144.20	14.10	Repair, dmdg sleeve
9R	726AW	LSP	20011220.00	0.00	144.20	14.40	Repair, dmdg sleeve
9R	726AW	LSP	20020115.00	0.00	144.20	14.40	Repair, dmdg sleeve
9R	726AW	LSP	20020204.00	0.00	144.20	17.30	Repair, dmdg sleeve
9R	726AW	LSP	20020221.00	0.00	144.20	0.00	Repair, dmdg sleeve
9R	726AW	LSP	20020227.00	0.00	144.20	0.00	Repair, dmdg sleeve
9R	726AW	LSP	20020307.00	0.00	144.20	13.40	Repair, dmdg sleeve
9R	726AW	LSP	20020314.00	0.00	144.20	0.00	Repair, dmdg sleeve
9R	726AW	LSP	20020404.00	0.00	144.20	13.10	Repair, dmdg sleeve
9R	726AW	LSP	20020425.00	0.00	144.20	12.90	Repair, dmdg sleeve
9R	726AW	LSP	20020508.00	0.00	144.20	12.80	Repair, dmdg sleeve
9R	726AW	LSP	20020522.00	0.00	144.20	13.20	Repair, dmdg sleeve
9R	726AW	LSP	20020606.00	0.00	144.20	13.30	Repair, dmdg sleeve
9R	726AW	LSP	20020612.00	0.00	144.20	14.00	Repair, dmdg sleeve
9R	726AW	LSP	20020711.00	0.00	144.20	13.90	Repair, dmdg sleeve
9R	726AW	LSP	20020726.00	0.00	144.20	14.00	Repair, dmdg sleeve
9R	726AW	LSP	20020826.00	0.00	144.20	14.50	Repair, dmdg sleeve
9R	726AW	LSP	20020905.00	0.00	144.20	15.20	Repair, dmdg sleeve

9R	726AW	LSP	20020920.00	0.00	144.20	15.80	Repair, dmdg sleeve
9R	726AW	LSP	20021004.00	0.00	144.20	13.00	Repair, dmdg sleeve
9R	726AW	LSP	20021018.00	0.00	144.20	12.10	Repair, dmdg sleeve
9R	726AW	LSP	20021104.00	0.00	144.20	12.10	Repair, dmdg sleeve
9R	726AW	LSP	20021126.00	0.00	144.20	14.80	Repair, dmdg sleeve
9R	726AW	LSP	20021207.00	0.00	144.20	13.10	Repair, dmdg sleeve
9R	726AW	LSP	20030108.00	0.00	144.20	3.10	Repair, dmdg sleeve
9R	726AW	LSP	20030124.00	0.00	144.20	3.60	Repair, dmdg sleeve
9R	726AW	LSP	20030210.00	0.00	144.20	0.00	DRILLERS ON WELL
9R	726AW	LSP	20030220.00	0.00	144.20	0.00	DRILLERS ON WELL
9R	726AW	LSP	20030318.00	0.00	144.20	0.00	N/A
9R	726AW	LSP	20030325.00	0.00	144.20	13.80	0
9R	726AW	LSP	20030507.00	0.00	144.20	12.10	Repair, dmdg sleeve
9R	726AW	LSP	20030521.00	0.00	144.20	11.40	Repair, dmdg sleeve
9R	726AW	LSP	20030609.00	0.00	144.20	11.40	Repair, dmdg sleeve
9R	726AW	LSP	20030624.00	0.00	144.20	11.20	Repair, dmdg sleeve
9R	726AW	LSP	20030710.00	0.00	144.20	11.60	Repair, dmdg sleeve
9R	726AW	LSP	20030904.00	0.00	144.20	11.10	Repair, dmdg sleeve
9R	726AW	LSP	20031010.00	0.00	144.20	11.70	Repair, dmdg sleeve
9R	726AW	LSP	20031106.00	0.00	144.20	11.50	Repair, dmdg sleeve
9R	726AW	LSP	20031211.00	0.00	144.20	11.10	Repair, dmdg sleeve
9R	726AW	LSP	20031229.00	0.00	144.20	11.30	Repair, dmdg sleeve
9R	726AW	LSP	20040114.00	0.00	144.20	10.20	Repair, dmdg sleeve
9R	726AW	LSP	20040203.00	0.00	144.20	10.20	Repair, dmdg sleeve
9R	726AW	LSP	20040211.00	0.00	144.20	10.80	Repair, dmdg sleeve
9R	726AW	LSP	20040305.00	0.00	144.20	10.00	Repair, dmdg sleeve
9R	726AW	LSP	20040401.00	0.00	144.20	10.20	Repair, dmdg sleeve
9R	726AW	LSP	20040414.00	0.00	144.20	9.20	Repair, dmdg sleeve
9R	726AW	LSP	20040513.00	0.00	144.20	9.50	Repair, dmdg sleeve
9R	726AW	LSP	20040603.00	0.00	144.20	10.10	Repair, dmdg sleeve
9R	726AW	LSP	20040701.00	0.00	144.20	0.00	Repair, dmdg sleeve
9R	726AW	LSP	20040708.00	0.00	144.20	10.50	Repair, dmdg sleeve
9R	726AW	LSP	20040715.00	0.00	144.20	0.00	PLATE OVER COND
9R	726AW	LSP	20040812.00	0.00	144.20	7.80	PLATE OVER COND
9R	726AW	LSP	20040824.00	0.00	144.20	7.80	PLATE OVER COND
9R	726AW	LSP	20040903.00	0.00	144.20	8.80	PLATE OVER COND
9R	726AW	LSP	20040929.00	0.00	144.20	7.00	PLATE OVER COND
9R	726AW	LSP	20041006.00	0.00	144.20	7.00	PLATE OVER COND
9R	726AW	LSP	20041104.00	0.00	144.20	7.00	PLATE OVER COND
9R	726AW	LSP	20041222.00	0.00	144.20	7.00	PLATE OVER COND
9R	726AW	LSP	20050414.00	0.00	144.20	6.60	PLATE OVER COND
9R	726AW	LSP	20050421.00	0.00	144.20	7.00	PLATE OVER COND
9R	726AW	LSP	20050504.00	0.00	144.20	7.00	PLATE OVER COND
9R	726AW	LSP	20050526.00	0.00	144.20	7.00	PLATE OVER COND
9R	726AW	LSP	20050609.00	0.00	144.20	7.80	PLATE OVER COND
9R	726AW	LSP	20050616.00	0.00	144.20	7.20	PLATE OVER COND
9R	726AW	LSP	20050627.00	0.00	144.20	7.80	PLATE OVER COND

9R	726AW	LSP	20050728.00	0.00	144.20	7.20	PLATE OVER COND
9R	726AW	LSP	20050804.00	0.00	144.20	7.70	PLATE OVER COND
9R	726AW	LSP	20050817.00	0.00	144.20	7.20	PLATE OVER COND
9R	726AW	LSP	20050824.00	0.00	144.20	7.80	PLATE OVER COND
9R	726AW	LSP	20050906.00	0.00	144.20	7.20	PLATE OVER COND
9R	726AW	LSP	20050919.00	0.00	144.20	7.70	PLATE OVER COND
9R	726AW	LSP	20051031.00	0.00	144.20	7.20	PLATE OVER COND
9R	726AW	LSP	20051117.00	0.00	144.20	12.20	PLATE OVER COND
9R	726AW	LSP	20051201.00	0.00	144.20	9.20	PLATE OVER COND
9R	726AW	LSP	20060106.00	0.00	144.20	9.20	PLATE OVER COND
9R	726AW	LSP	20060118.00	0.00	144.20	9.20	PLATE OVER COND
9R	726AW	LSP	20060302.00	0.00	144.20	8.20	PLATE OVER COND
9R	726AW	LSP	20060425.00	0.00	144.20	9.20	PLATE OVER COND
9R	726AW	LSP	20060508.00	0.00	144.20	9.20	PLATE OVER COND
9R	726AW	LSP	20060802.00	0.00	144.20	8.20	PLATE OVER COND
9R	726AW	LSP	20060814.00	0.00	144.20	8.20	
9R	726AW	LSP	20060907.00	0.00	144.20	8.20	
9R	726AW	LSP	20061012.00	0.00	144.20	8.20	
9R	726AW	LSP	20061019.00	0.00	144.20	8.20	
9R	726AW	LSP	20061206.00	0.00	144.20	10.20	
9R	726AW	LSP	20061226.00	0.00	144.20	10.20	
9R	726AW	LSP	20070104.00	0.00	144.20	7.20	
9R	726AW	LSP	20070110.00	0.00	144.20	10.20	
9R	726AW	LSP	20070131.00	0.00	144.20	10.20	
9R	726AW	LSP	20070208.00	0.00	144.20	10.20	
9R	726AW	LSP	20070215.00	0.00	144.20	10.20	
9R	726AW	LSP	20070228.00	0.00	144.20	10.20	
9R	726AW	LSP	20070314.00	0.00	144.20	10.20	
9R	726AW	LSP	20070319.00	0.00	144.20	10.20	
9R	726AW	LSP	20070502.00	0.00	144.20	10.20	
9R	726AW	LSP	20070511.00	0.00	144.20	10.20	
9R	726AW	LSP	20070516.00	0.00	144.20	10.20	
9R	726AW	LSP	20070606.00	0.00	144.20	10.20	Disassembled
9R	726AW	LSP	20070613.00	0.00	144.20	10.20	Disassembled
9R	726AW	LSP	20070627.00	0.00	144.20	10.20	Disassembled
9R	726AW	LSP	20070706.00	0.00	144.20	7.20	
9R	726AW	LSP	20070711.00	0.00	144.20	10.20	Off for many years
9R	726AW	LSP	20070726.00	0.00	144.20	10.20	
9R	726AW	LSP	20070801.00	0.00	144.20	10.20	
9R	726AW	LSP	20070816.00	0.00	144.20	10.20	
9R	726AW	LSP	20070822.00	0.00	144.20	10.20	
9R	726AW	LSP	20070913.00	0.00	144.20	10.20	
9R	726AW	LSP	20070919.00	0.00	144.20	10.20	Off for many years
9R	726AW	LSP	20070926.00	0.00	144.20	12.20	
9R	726AW	LSP	20071015.00	0.00	144.20	12.20	
9R	726AW	LSP	20071018.00	0.00	144.20	12.20	Off for many years
9R	726AW	LSP	20071022.00	0.00	144.20	12.20	Off for many years

9R	726AW	LSP	20071031.00	0.00	144.20	12.20	Off for many years
9R	726AW	LSP	20071105.00	0.00	144.20	12.20	Off for many years
9R	726AW	LSP	20071113.00	0.00	144.20	12.20	Off for many years
9R	726AW	LSP	20071203.00	0.00	144.20	12.20	Off for many years
9R	726AW	LSP	20071206.00	0.00	144.20	12.20	Off many years
9R	726AW	LSP	20071212.00	0.00	144.20	12.20	Off for many years
9R	726AW	LSP	20071221.00	0.00	144.20	12.20	Off many years.
9R	726AW	LSP	20080108.00	0.00	144.20	12.20	Off many years
9R	726AW	LSP	20080116.00	0.00	144.20	12.20	Off many years
9R	726AW	LSP	20080123.00	0.00	144.20	12.20	Off many years
9R	726AW	LSP	20080131.00	0.00	144.20	12.20	Off many years
9R	726AW	LSP	20080206.00	0.00	144.20	12.20	Off many years
9R	726AW	LSP	20080213.00	0.00	144.20	12.20	
9R	726AW	LSP	20080221.00	0.00	144.20	12.20	
9R	726AW	LSP	20080227.00	0.00	144.20	12.20	Off many years
9R	726AW	LSP	20080312.00	0.00	144.20	7.20	Off many years
9R	726AW	LSP	20080402.00	0.00	144.20	7.20	Off Many Years
9R	726AW	LSP	20080408.00	0.00	144.20	8.20	Off many years
9R	726AW	LSP	20080416.00	0.00	144.20	8.20	Off many years
9R	726AW	LSP	20080430.00	0.00	144.20	8.20	Off many years
9R	726AW	LSP	20080514.00	0.00	144.20	8.20	
9R	726AW	LSP	20080521.00	0.00	144.20	8.20	Off many years
9R	726AW	LSP	20080630.00	0.00	144.20	8.00	Off many years
9R	726AW	LSP	20080714.00	0.00	144.20	8.00	Off many years
9R	726AW	LSP	20080717.00	0.00	144.20	8.20	Off Many Years
9R	726AW	LSP	20080723.00	0.00	144.20	8.20	Off many years
9R	726AW	LSP	20080812.00	0.00	144.20	8.20	Off many years
9R	726AW	LSP	20081103.00	0.00	144.20	9.20	Off many years
9R	726AW	LSP	20081210.00	0.00	144.20	9.20	off many years
9R	726AW	LSP	20081219.00	0.00	144.20	9.20	
9R	726AW	LSP	20090107.00	0.00	144.20	11.20	Off many years
9R	726AW	LSP	20090114.00	0.00	144.20	11.20	OFF MANY YEARS
9R	726AW	LSP	20090130.00	0.00	144.20	11.20	Off for years
9R	726AW	LSP	20090203.00	0.00	144.20	11.20	Off many years.
9R	726AW	LSP	20090212.00	0.00	144.20	11.20	Off many years.
9R	726AW	LSP	20090226.00	0.00	144.20	11.20	Off many years.
9R	726AW	LSP	20090312.00	0.00	144.20	11.20	Off many years.
9R	726AW	LSP	20090318.00	0.00	144.20	11.20	Off for many years.
9R	726AW	LSP	20090325.00	0.00	144.20	8.20	Disabled for years.
9R	726AW	LSP	20090401.00	0.00	144.20	8.20	Off for many yrs.
9R	726AW	LSP	20090408.00	0.00	144.20	8.20	Off for years.
9R	726AW	LSP	20090416.00	0.00	144.20	8.20	Off for many years.
9R	726AW	LSP	20090604.00	0.00	144.20	8.20	Off for many years.
9R	726AW	LSP	20090611.00	0.00	144.20	8.20	Off for many years.
9R	726AW	LSP	20090701.00	0.00	144.20	8.20	Off for many years.
9R	726AW	LSP	20090716.00	0.00	144.20	8.20	Off for many years
9R	726AW	LSP	20090722.00	0.00	144.20	8.20	Off for many yrs.

9R	726AW	LSP	20090812.00	0.00	144.20	8.20	Off for many yrs.
9R	726AW	LSP	20090826.00	0.00	144.20	8.20	Off for many years.
9R	726AW	LSP	20090917.00	0.00	144.20	8.20	Off for many yrs
9R	726AW	LSP	20090925.00	0.00	144.20	8.20	Off for many years.
9R	726AW	LSP	20091029.00	0.00	144.20	8.20	Off for many years.
9R	726AW	LSP	20091202.00	0.00	144.20	8.20	Off for many years.
9R	726AW	LSP	20091223.00	0.00	144.20	8.20	Off many years
9R	726AW	LSP	20100211.00	0.00	144.20	8.20	Off for many years
9R	726AW	LSP	20100218.00	0.00	144.20	8.20	Off for many years
9R	726AW	LSP	20100317.00	0.00	144.20		Off for many years
9R	726AW	LSP	20100421.00	0.00	144.20	8.20	Off for many years
9R	726AW	LSP	20100526.00	0.00	144.20		
9R	726AW	LSP	20100616.00	0.00	144.20	8.20	Off for many years.
9R	726AW	LSP	20100719.00	0.00	144.20	8.20	
9R	726AW	LSP	20100812.00	0.00	144.20	8.20	Off for many yrs
9R	726AW	LSP	20100915.00	0.00	144.20	8.20	Base Plate w/ 3/4"
9R	726AW	LSP	20101021.00	0.00	144.20	8.20	Base Plate w/3/4"
9R	726AW	LSP	20101123.00	0.00	144.20	8.20	Base Plate w/ 3/4"
9R	726AW	LSP	20110106.00	0.00	144.20	8.20	Base Plate w/ 3/4"
9R	726AW	LSP	20110202.00	0.00	144.20	8.20	Base Plate w/ 3/4"
9R	726AW	LSP	20110317.00	0.00	144.20	8.20	Base Plate w/ 3/4"
9R	726AW	LSP	20110418.00	0.00	144.20		Base Plate w/ 3/4"
9R	726AW	LSP	20110518.00	0.00	144.20	7.20	Base Plate w/ 3/4"
9R	726AW	LSP	20110707.00	0.00	144.20	7.20	Base Plate w/ 3/4"
9R	726AW	LSP	20110726.00	0.00	144.20	7.20	Base Plate w/ 3/4"
9R	726AW	LSP	20110825.00	0.00	144.20	7.20	Base Plate w/3/4"
9R	726AW	LSP	20110928.00	0.00	144.20		Base Plate w/3/4"
9R	726AW	LSP	20111018.00	0.00	144.20		Base Plate w/3/4"
9R	726AW	LSP	20111130.00	0.00	144.20		Base Plate w/3/4"
9R	726AW	LSP	20111227.00	0.00	144.20		Base Plate w/3/4"
9R	726AW	LSP	20120206.00	0.00	144.20		Base Plate w/3/4"
9R	726AW	LSP	20120314.00	0.00	144.20		Base Plate w/3/4"
9R	726AW	LSP	20120404.00	0.00	144.20		Base Plate w/3/4"
9R	726AW	LSP	20120424.00	0.00	144.20		Base Plate w/3/4"
9R	726AW	LSP	20120620.00	0.00	144.20		Base Plate w/3/4"
9R	726AW	LSP	20120822.00	0.00	144.20		Base Plate w/3/4"
9R	726AW	LSP	20121011.00	0.00	144.20		Base Plate w/3/4"
9R	726AW	LSP	20121128.00	0.00	144.20		Base Plate w/3/4"
9R	726AW	LSP	20130128.00	0.00	144.20		Base Plate w/3/4"
9R	726AW	LSP	20130325.00	0.00	144.20		Base Plate w/3/4"
9R	726AW	LSP	20130430.00	0.00	144.20		Base Plate w/3/4"
9R	726AW	LSP	20130605.00	0.00	144.20		Base Plate w/3/4"
9R	726AW	LSP	20130717.00	0.00	144.20		Base Plate w/3/4"
9R	726AW	LSP	20130828.00	0.00	144.20		Base Plate w/ 3/4"
9R	726AW	LSP	20131003.00	0.00	144.20		Base Plate w/ 3/4"
9R	726AW	LSP	20131107.00	0.00	144.20		Base plate w/ 3/4"
9R	726AW	LSP	20131210.00	0.00	144.20		Base plate w/ 3/4"

9R	726AW	LSP	20140312.00	0.00	144.20		Base plate w/ 3/4"
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## LACFCD Seawater Barrier database: Historical Injection Rate Information - Well 9U

PROJ	FCD	AQUIF	Date	Q (CFS)	RP_EL	ELEV	REMARKS
9U	727AD	LSP	19660207	0.00	136.50	0.00	REPAIR PACKER
9U	727AD	LSP	19660414	0.00	136.50	0.00	REPAIR PACKER
9U	727AD	LSP	19660422	0.00	136.50	0.00	REPAIR N2 LINE
9U	727AD	LSP	19660822	0.00	136.50	0.00	REDEVELOPMENT
9U	727AD	LSP	19661028	0.84	136.50	59.70	RECENT REDEV.
9U	727AD	LSP	19661130	0.75	136.50	69.20	
9U	727AD	LSP	19661230	0.75	136.50	76.10	
9U	727AD	LSP	19670126	0.72	136.50	79.60	
9U	727AD	LSP	19670216	0.74	136.50	83.30	
9U	727AD	LSP	19670228	0.73	136.50	82.50	
9U	727AD	LSP	19670314	0.76	136.50	84.00	
9U	727AD	LSP	19670330	0.75	136.50	88.70	
9U	727AD	LSP	19670413	0.73	136.50	91.20	
9U	727AD	LSP	19670427	0.72	136.50	92.00	
9U	727AD	LSP	19670511	0.63	136.50	93.50	
9U	727AD	LSP	19670531	0.69	136.50	110.50	
9U	727AD	LSP	19670615	0.65	136.50	127.10	
9U	727AD	LSP	19670629	0.60	136.50	136.50	
9U	727AD	LSP	19670713	0.48	136.50	150.80	
9U	727AD	LSP	19670727	0.62	136.50	135.40	
9U	727AD	LSP	19670817	0.61	136.50	133.50	
9U	727AD	LSP	19670831	0.61	136.50	136.50	
9U	727AD	LSP	19670914	0.59	136.50	141.10	
9U	727AD	LSP	19670928	0.58	136.50	148.00	
9U	727AD	LSP	19671011	0.61	136.50	136.50	BLEED AIR GAGE
9U	727AD	LSP	19671026	0.59	136.50	148.10	
9U	727AD	LSP	19671116	0.58	136.50	143.50	
9U	727AD	LSP	19671128	0.58	136.50	141.10	
9U	727AD	LSP	19671214	0.56	136.50	141.10	
9U	727AD	LSP	19671228	0.55	136.50	152.00	
9U	727AD	LSP	19680118	0.56	136.50	152.60	
9U	727AD	LSP	19680125	0.56	136.50	151.70	
9U	727AD	LSP	19680215	0.55	136.50	148.10	
9U	727AD	LSP	19680229	0.55	136.50	149.20	
9U	727AD	LSP	19680314	0.55	136.50	146.20	
9U	727AD	LSP	19680328	0.54	136.50	150.40	
9U	727AD	LSP	19680411	0.56	136.50	151.50	
9U	727AD	LSP	19680430	0.55	136.50	159.60	
9U	727AD	LSP	19680516	0.52	136.50	170.00	
9U	727AD	LSP	19680529	0.51	136.50	171.10	
9U	727AD	LSP	19680613	0.50	136.50	173.00	
9U	727AD	LSP	19680627	0.47	136.50	185.30	
9U	727AD	LSP	19680711	0.48	136.50	168.00	
9U	727AD	LSP	19680729	0.57	136.50	168.80	
9U	727AD	LSP	19680815	0.57	136.50	161.90	

9U	727AD	LSP	19680829	0.58	136.50	156.40	ACID
9U	727AD	LSP	19680912	0.57	136.50	158.40	
9U	727AD	LSP	19680927	0.00	136.50	2.50	
9U	727AD	LSP	19681017	0.58	136.50	157.30	
9U	727AD	LSP	19681031	0.61	136.50	117.30	
9U	727AD	LSP	19681113	0.50	136.50	155.00	
9U	727AD	LSP	19681127	0.58	136.50	159.50	
9U	727AD	LSP	19681212	0.52	136.50	171.10	
9U	727AD	LSP	19681227	0.49	136.50	168.80	
9U	727AD	LSP	19690122	0.00	136.50	0.00	REDEV AIR PUMP
9U	727AD	LSP	19690130	0.00	136.50	14.20	REDEVELOPMENT
9U	727AD	LSP	19690227	0.42	136.50	161.90	REDEV JAN
9U	727AD	LSP	19690327	0.41	136.50	175.30	
9U	727AD	LSP	19690429	0.42	136.50	164.20	
9U	727AD	LSP	19690528	0.37	136.50	168.80	
9U	727AD	LSP	19690626	0.33	136.50	183.80	
9U	727AD	LSP	19690730	0.32	136.50	184.90	
9U	727AD	LSP	19690828	0.38	136.50	165.00	
9U	727AD	LSP	19690930	0.31	136.50	187.30	
9U	727AD	LSP	19691030	0.35	136.50	191.90	
9U	727AD	LSP	19691118	0.00	136.50	0.00	L S P TESTS
9U	727AD	LSP	19691126	0.20	136.50	161.90	
9U	727AD	LSP	19691208	0.00	136.50	0.00	REDEVELOPMENT
9U	727AD	LSP	19691230	0.00	136.50	11.80	REDEVELWPMENT
9U	727AD	LSP	19700129	0.00	136.50	7.00	
9U	727AD	LSP	19700226	0.00	136.50	5.40	
9U	727AD	LSP	19700326	0.00	136.50	10.00	
9U	727AD	LSP	19700429	0.00	136.50	8.50	
9U	727AD	LSP	19700528	0.00	136.50	8.50	
9U	727AD	LSP	19700625	0.00	136.50	8.50	OFF LAST MO.
9U	727AD	LSP	19700730	0.62	136.50	145.70	OFF 6/70
9U	727AD	LSP	19700827	0.64	136.50	21.00	
9U	727AD	LSP	19700910	0.00	136.50	0.00	REPAIR CONDUCT
9U	727AD	LSP	19701001	0.48	136.50	144.50	
9U	727AD	LSP	19701029	0.55	136.50	164.20	
9U	727AD	LSP	19701125	0.60	136.50	148.00	
9U	727AD	LSP	19701229	0.58	136.50	164.20	
9U	727AD	LSP	19710128	0.52	136.50	173.40	
9U	727AD	LSP	19710225	0.53	136.50	166.50	
9U	727AD	LSP	19710330	0.49	136.50	180.40	
9U	727AD	LSP	19710429	0.47	136.50	194.20	
9U	727AD	LSP	19710527	0.32	136.50	164.20	
9U	727AD	LSP	19710630	0.35	136.50	155.00	
9U	727AD	LSP	19710729	0.38	136.50	148.00	
9U	727AD	LSP	19710826	0.30	136.50	136.50	
9U	727AD	LSP	19710930	0.20	136.50	154.90	
9U	727AD	LSP	19711028	0.25	136.50	161.90	



9U	727AD	LSP	19711122	0.25	136.50	154.90	
9U	727AD	LSP	19711229	0.30	136.50	147.60	
9U	727AD	LSP	19720130	0.30	136.50	119.10	
9U	727AD	LSP	19720224	0.29	136.50	121.10	
9U	727AD	LSP	19720330	0.28	136.50	121.80	
9U	727AD	LSP	19720427	0.25	136.50	128.70	
9U	727AD	LSP	19720601	0.25	136.50	138.80	
9U	727AD	LSP	19720629	0.26	136.50	138.80	
9U	727AD	LSP	19720727	0.26	136.50	127.70	
9U	727AD	LSP	19720831	0.25	136.50	118.30	
9U	727AD	LSP	19720928	0.25	136.50	111.60	
9U	727AD	LSP	19721017	0.00	136.50	0.00	OFF MWD REQST
9U	727AD	LSP	19721030	0.25	136.50	108.60	
9U	727AD	LSP	19721130	0.23	136.50	28.60	
9U	727AD	LSP	19721227	0.20	136.50	125.70	
9U	727AD	LSP	19730202	0.10	136.50	114.00	
9U	727AD	LSP	19730228	0.15	136.50	111.50	
9U	727AD	LSP	19730329	0.19	136.50	125.40	
9U	727AD	LSP	19730425	0.15	136.50	128.70	
9U	727AD	LSP	19730531	0.15	136.50	124.60	
9U	727AD	LSP	19730628	0.10	136.50	123.40	
9U	727AD	LSP	19730726	0.11	136.50	123.10	
9U	727AD	LSP	19730829	0.10	136.50	98.80	
9U	727AD	LSP	19730927	0.10	136.50	115.50	
9U	727AD	LSP	19731030	0.15	136.50	130.50	
9U	727AD	LSP	19731126	0.19	136.50	132.10	
9U	727AD	LSP	19731228	0.23	136.50	132.20	
9U	727AD	LSP	19740131	0.16	136.50	132.50	
9U	727AD	LSP	19740301	0.16	136.50	134.40	
9U	727AD	LSP	19740328	0.17	136.50	133.50	
9U	727AD	LSP	19740422	0.00	136.50	0.00	APPURT RELOCAT
9U	727AD	LSP	19740501	0.00	136.50	0.00	NO MEAS. TAKEN
9U	727AD	LSP	19740606	0.00	136.50	0.00	REDEVELOPMENT
9U	727AD	LSP	19740627	0.47	136.50	55.50	
9U	727AD	LSP	19740801	0.47	136.50	64.60	
9U	727AD	LSP	19740829	0.48	136.50	68.50	
9U	727AD	LSP	19741003	0.00	136.50	-9.90	
9U	727AD	LSP	19741031	0.42	136.50	83.90	
9U	727AD	LSP	19741127	0.45	136.50	93.20	
9U	727AD	LSP	19741202	0.00	136.50	0.00	MWD PRESS TEST
9U	727AD	LSP	19741231	0.48	136.50	114.80	
9U	727AD	LSP	19750130	0.45	136.50	115.90	
9U	727AD	LSP	19750227	0.42	136.50	136.50	
9U	727AD	LSP	19750327	0.52	136.50	83.30	
9U	727AD	LSP	19750501	0.52	136.50	86.70	
9U	727AD	LSP	19750530	0.51	136.50	93.20	
9U	727AD	LSP	19750626	0.51	136.50	99.00	

9U	727AD	LSP	19750731	0.51	136.50	94.10	
9U	727AD	LSP	19750801	0.00	136.50	0.00	RUPTURED LINE
9U	727AD	LSP	19750828	0.00	136.50	0.20	
9U	727AD	LSP	19751002	0.52	136.50	85.20	
9U	727AD	LSP	19751030	0.52	136.50	88.00	
9U	727AD	LSP	19751126	0.51	136.50	84.90	
9U	727AD	LSP	19760102	0.50	136.50	84.30	
9U	727AD	LSP	19760129	0.51	136.50	85.20	
9U	727AD	LSP	19760226	0.48	136.50	85.10	
9U	727AD	LSP	19760401	0.47	136.50	87.00	
9U	727AD	LSP	19760429	0.42	136.50	90.70	
9U	727AD	LSP	19760527	0.43	136.50	91.80	
9U	727AD	LSP	19760701	0.42	136.50	91.60	
9U	727AD	LSP	19760729	0.45	136.50	91.90	
9U	727AD	LSP	19760902	0.45	136.50	93.00	
9U	727AD	LSP	19761001	0.45	136.50	90.60	
9U	727AD	LSP	19761028	0.45	136.50	93.30	
9U	727AD	LSP	19761124	0.45	136.50	91.70	
9U	727AD	LSP	19761230	0.45	136.50	89.30	
9U	727AD	LSP	19770127	0.44	136.50	90.50	
9U	727AD	LSP	19770303	0.45	136.50	95.30	
9U	727AD	LSP	19770331	0.45	136.50	99.00	
9U	727AD	LSP	19770428	0.41	136.50	92.00	
9U	727AD	LSP	19770603	0.42	136.50	90.90	
9U	727AD	LSP	19770630	0.41	136.50	86.30	
9U	727AD	LSP	19770728	0.42	136.50	76.20	
9U	727AD	LSP	19770901	0.45	136.50	64.30	
9U	727AD	LSP	19770929	0.67	136.50	82.90	
9U	727AD	LSP	19771027	0.68	136.50	77.80	
9U	727AD	LSP	19771201	0.70	136.50	75.60	
9U	727AD	LSP	19771229	0.70	136.50	60.30	
9U	727AD	LSP	19780126	0.70	136.50	67.50	
9U	727AD	LSP	19780224	0.79	136.50	70.20	
9U	727AD	LSP	19780330	0.80	136.50	71.40	
9U	727AD	LSP	19780427	0.72	136.50	117.10	
9U	727AD	LSP	19780601	0.70	136.50	117.10	
9U	727AD	LSP	19780629	0.71	136.50	116.60	
9U	727AD	LSP	19780727	0.67	136.50	116.50	
9U	727AD	LSP	19780831	0.72	136.50	103.90	
9U	727AD	LSP	19780928	0.72	136.50	99.80	
9U	727AD	LSP	19781102	0.78	136.50	95.40	
9U	727AD	LSP	19781130	0.78	136.50	94.80	
9U	727AD	LSP	19781228	0.78	136.50	94.70	
9U	727AD	LSP	19790202	0.75	136.50	96.20	
9U	727AD	LSP	19790216	0.00	136.50	0.00	OFF PRO LAYOFFS
9U	727AD	LSP	19790301	0.75	136.50	102.00	
9U	727AD	LSP	19790329	0.72	136.50	104.90	

9U	727AD	LSP	19790426	0.67	136.50	101.00	
9U	727AD	LSP	19790524	0.50	136.50	69.10	
9U	727AD	LSP	19790529	0.00	136.50	0.00	TIE IN SEGMENT
9U	727AD	LSP	19790702	0.00	136.50	8.40	
9U	727AD	LSP	19790718	0.75	136.50	69.50	
9U	727AD	LSP	19790828	0.73	136.50	89.50	
9U	727AD	LSP	19790925	0.75	136.50	57.00	
9U	727AD	LSP	19791030	0.75	136.50	50.40	
9U	727AD	LSP	19791127	0.73	136.50	55.60	
9U	727AD	LSP	19791226	0.71	136.50	58.70	
9U	727AD	LSP	19800201	0.75	136.50	63.30	
9U	727AD	LSP	19800226	0.75	136.50	67.80	
9U	727AD	LSP	19800325	0.62	136.50	61.60	
9U	727AD	LSP	19800429	0.74	136.50	65.50	
9U	727AD	LSP	19800528	0.77	136.50	62.00	
9U	727AD	LSP	19800624	0.75	136.50	66.00	
9U	727AD	LSP	19800805	0.78	136.50	55.70	
9U	727AD	LSP	19800902	0.80	136.50	53.60	
9U	727AD	LSP	19800930	0.79	136.50	54.40	
9U	727AD	LSP	19801028	0.78	136.50	61.40	
9U	727AD	LSP	19801125	0.77	136.50	63.10	
9U	727AD	LSP	19801230	0.75	136.50	71.70	
9U	727AD	LSP	19810127	0.74	136.50	76.40	
9U	727AD	LSP	19810224	0.75	136.50	84.60	
9U	727AD	LSP	19810324	0.75	136.50	88.00	
9U	727AD	LSP	19810428	0.75	136.50	94.30	
9U	727AD	LSP	19810527	0.77	136.50	87.90	
9U	727AD	LSP	19810630	0.81	136.50	135.40	
9U	727AD	LSP	19810717	0.00	136.50	0.00	REPLACE VALVE
9U	727AD	LSP	19810731	0.00	136.50	-4.30	SEE NOTE 2
9U	727AD	LSP	19810825	0.73	136.50	61.20	
9U	727AD	LSP	19810929	0.21	136.50	54.00	
9U	727AD	LSP	19810930	0.00	136.50	0.00	REPAIRS
9U	727AD	LSP	19811005	0.00	136.50	0.00	REPAIR LEAKAGE
9U	727AD	LSP	19811007	0.00	136.50	0.00	REPAIR VALVE
9U	727AD	LSP	19811027	0.85	136.50	71.50	
9U	727AD	LSP	19811124	0.84	136.50	74.00	
9U	727AD	LSP	19811222	0.85	136.50	78.70	
9U	727AD	LSP	19820126	0.82	136.50	76.60	
9U	727AD	LSP	19820224	0.82	136.50	84.70	
9U	727AD	LSP	19820407	0.85	136.50	85.10	
9U	727AD	LSP	19820504	0.84	136.50	83.40	
9U	727AD	LSP	19820602	0.83	136.50	88.70	
9U	727AD	LSP	19820630	0.80	136.50	91.60	
9U	727AD	LSP	19820728	0.78	136.50	94.40	
9U	727AD	LSP	19820910	0.79	136.50	86.00	
9U	727AD	LSP	19820921	0.80	136.50	84.30	

9U	727AD	LSP	19821105	0.78	136.50	80.00	
9U	727AD	LSP	19821202	0.78	136.50	76.70	
9U	727AD	LSP	19830103	0.55	136.50	58.10	
9U	727AD	LSP	19830128	0.78	136.50	78.20	
9U	727AD	LSP	19830225	0.76	136.50	84.70	
9U	727AD	LSP	19830330	0.73	136.50	79.50	
9U	727AD	LSP	19830426	0.00	136.50	0.00	REDEVELOPMENT
9U	727AD	LSP	19830429	0.00	136.50	0.00	REDEVELOPMENT
9U	727AD	LSP	19830527	0.50	136.50	65.70	
9U	727AD	LSP	19830623	0.65	136.50	95.80	
9U	727AD	LSP	19830722	0.65	136.50	104.00	
9U	727AD	LSP	19830902	0.65	136.50	111.50	
9U	727AD	LSP	19830929	0.65	136.50	124.10	
9U	727AD	LSP	19831028	0.61	136.50	132.60	
9U	727AD	LSP	19831108	0.00	136.50	0.00	PR STA. SECURED
9U	727AD	LSP	19831208	0.61	136.50	122.10	
9U	727AD	LSP	19840106	0.58	136.50	136.50	
9U	727AD	LSP	19840202	0.55	136.50	152.70	
9U	727AD	LSP	19840302	0.54	136.50	159.60	
9U	727AD	LSP	19840328	0.54	136.50	164.20	
9U	727AD	LSP	19840411	0.00	136.50	0.00	REDEVELOPMENT
9U	727AD	LSP	19840425	0.00	136.50	5.90	REDEVELOPMENT
9U	727AD	LSP	19840523	0.58	136.50	104.30	
9U	727AD	LSP	19840628	0.52	136.50	99.00	
9U	727AD	LSP	19840725	0.55	136.50	99.20	
9U	727AD	LSP	19840829	0.45	136.50	107.90	
9U	727AD	LSP	19840926	0.45	136.50	110.50	
9U	727AD	LSP	19841030	0.44	136.50	110.50	
9U	727AD	LSP	19841129	0.55	136.50	125.80	
9U	727AD	LSP	19841227	0.48	136.50	109.50	
9U	727AD	LSP	19850130	0.60	136.50	148.00	
9U	727AD	LSP	19850227	0.50	136.50	145.70	
9U	727AD	LSP	19850328	0.00	136.50	0.00	REDEVELOPMENT
9U	727AD	LSP	19850423	0.50	136.50	92.80	
9U	727AD	LSP	19850530	0.50	136.50	145.70	
9U	727AD	LSP	19850627	0.35	136.50	150.30	
9U	727AD	LSP	19850730	0.25	136.50	155.00	
9U	727AD	LSP	19850828	0.25	136.50	164.20	
9U	727AD	LSP	19850910	0.00	136.50	0.00	INST HYDROELE
9U	727AD	LSP	19851001	0.00	136.50	-13.50	
9U	727AD	LSP	19851031	0.00	136.50	-3.80	
9U	727AD	LSP	19851205	0.29	136.50	136.50	
9U	727AD	LSP	19860103	0.28	136.50	138.80	
9U	727AD	LSP	19860129	0.25	136.50	150.40	
9U	727AD	LSP	19860227	0.24	136.50	155.00	
9U	727AD	LSP	19860402	0.25	136.50	138.80	
9U	727AD	LSP	19860429	0.00	136.50	0.00	REDEVELOPMENT

9U	727AD	LSP	19860501	0.00	136.50	7.50	REDEVELOPMENT
9U	727AD	LSP	19860529	0.35	136.50	111.50	
9U	727AD	LSP	19860703	0.17	136.50	126.00	
9U	727AD	LSP	19860801	0.21	136.50	132.00	
9U	727AD	LSP	19860827	0.15	136.50	132.00	
9U	727AD	LSP	19861001	0.20	136.50	124.00	
9U	727AD	LSP	19861030	0.23	136.50	129.40	
9U	727AD	LSP	19861125	0.20	136.50	128.50	
9U	727AD	LSP	19861231	0.20	136.50	133.50	
9U	727AD	LSP	19870130	0.19	136.50	136.50	
9U	727AD	LSP	19870225	0.20	136.50	136.50	
9U	727AD	LSP	19870401	0.20	136.50	141.10	
9U	727AD	LSP	19870429	0.20	136.50	143.40	
9U	727AD	LSP	19870528	0.18	136.50	141.10	
9U	727AD	LSP	19870702	0.20	136.50	144.10	
9U	727AD	LSP	19870730	0.19	136.50	136.50	
9U	727AD	LSP	19870828	0.19	136.50	138.80	
9U	727AD	LSP	19870930	0.18	136.50	138.80	
9U	727AD	LSP	19871028	0.20	136.50	136.50	
9U	727AD	LSP	19871125	0.21	136.50	131.40	
9U	727AD	LSP	19871230	0.20	136.50	136.50	
9U	727AD	LSP	19880127	0.11	136.50	138.80	
9U	727AD	LSP	19880224	0.15	136.50	138.80	
9U	727AD	LSP	19880329	0.15	136.50	148.10	
9U	727AD	LSP	19880427	0.29	136.50	148.00	
9U	727AD	LSP	19880525	0.20	136.50	150.40	
9U	727AD	LSP	19880629	0.31	136.50	152.60	
9U	727AD	LSP	19880727	0.20	136.50	150.30	
9U	727AD	LSP	19880831	0.28	136.50	141.10	
9U	727AD	LSP	19880929	0.20	136.50	136.50	
9U	727AD	LSP	19881026	0.20	136.50	132.50	
9U	727AD	LSP	19881130	0.15	136.50	136.50	
9U	727AD	LSP	19881229	0.20	136.50	148.00	
9U	727AD	LSP	19890126	0.20	136.50	152.70	
9U	727AD	LSP	19890223	0.18	136.50	154.90	
9U	727AD	LSP	19890329	0.12	136.50	157.90	
9U	727AD	LSP	19890504	0.13	136.50	157.20	
9U	727AD	LSP	19890602	0.10	136.50	157.30	
9U	727AD	LSP	19890628	0.10	136.50	159.60	
9U	727AD	LSP	19890802	0.19	136.50	141.10	
9U	727AD	LSP	19890830	0.20	136.50	136.50	
9U	727AD	LSP	19890928	0.00	136.50	11.40	REPAIR
9U	727AD	LSP	19891102	0.00	136.50	8.50	REPAIR
9U	727AD	LSP	19891129	0.00	136.50	8.30	REPAIR
9U	727AD	LSP	19900104	0.00	136.50	9.00	
9U	727AD	LSP	19900131	0.00	136.50	8.90	REPAIR
9U	727AD	LSP	19900228	0.00	136.50	9.20	REPAIR

9U	727AD	LSP	19900405	0.00	136.50	8.40	REPAIR
9U	727AD	LSP	19900503	0.00	136.50	9.20	REPAIR
9U	727AD	LSP	19900601	0.00	136.50	8.80	REPAIR
9U	727AD	LSP	19900705	0.00	136.50	8.70	REPAIR
9U	727AD	LSP	19900801	0.00	136.50	9.00	REPAIR
9U	727AD	LSP	19900830	0.00	136.50	9.40	REPAIR
9U	727AD	LSP	19901003	0.00	136.50	9.40	REPAIR
9U	727AD	LSP	19901031	0.00	136.50	9.50	REPAIR
9U	727AD	LSP	19901205	0.00	136.50	8.90	REPAIR
9U	727AD	LSP	19901228	0.00	136.50	8.80	REPAIR
9U	727AD	LSP	19910130	0.00	136.50	9.20	REPAIR
9U	727AD	LSP	19910227	0.00	136.50	9.00	REPAIR
9U	727AD	LSP	19910403	0.00	136.50	9.50	REPAIR
9U	727AD	LSP	19910501	0.00	136.50	9.00	REPAIR
9U	727AD	LSP	19910612	0.00	136.50	7.50	
9U	727AD	LSP	19910714	0.00	136.50	2.00	MEASURED
9U	727AD	LSP	19910807	0.00	136.50	-0.40	OFF FOR CONSTR.
9U	727AD	LSP	19910906	0.00	136.50	1.30	REPAIR
9U	727AD	LSP	19911003	0.00	136.50	2.00	REPAIR
9U	727AD	LSP	19911031	0.00	136.50	3.20	REPAIR
9U	727AD	LSP	19911127	0.00	136.50	3.80	REPAIR
9U	727AD	LSP	19911227	0.00	136.50	3.50	REPAIR
9U	727AD	LSP	19920129	0.00	136.50	4.20	REPAIR
9U	727AD	LSP	19920227	0.00	136.50	4.20	REPAIR
9U	727AD	LSP	19920408	0.00	136.50	2.90	REPAIR
9U	727AD	LSP	19920429	0.00	136.50	3.90	REPAIR
9U	727AD	LSP	19920604	0.00	136.50	4.60	REPAIR
9U	727AD	LSP	19920702	0.00	136.50	3.20	REPAIR
9U	727AD	LSP	19920805	0.00	136.50	3.50	REPAIR
9U	727AD	LSP	19920902	0.00	136.50	2.90	REPAIR
9U	727AD	LSP	19921002	0.00	136.50	2.50	REPAIR
9U	727AD	LSP	19921028	0.00	136.50	2.80	REPAIR
9U	727AD	LSP	19921203	0.00	136.50	4.00	REPAIR
9U	727AD	LSP	19921217	0.00	136.50	3.20	REPAIR
9U	727AD	LSP	19930128	0.00	136.50	4.20	REPAIR
9U	727AD	LSP	19930224	0.00	136.50	1.50	REPAIR
9U	727AD	LSP	19930331	0.00	136.50	4.40	REPAIR
9U	727AD	LSP	19930428	0.00	136.50	4.90	REPAIR
9U	727AD	LSP	19930603	0.00	136.50	5.20	REPAIR
9U	727AD	LSP	19930630	0.00	136.50	5.50	REPAIR
9U	727AD	LSP	19930728	0.00	136.50	6.40	REPAIR
9U	727AD	LSP	19930826	0.00	136.50	6.60	REPAIR
9U	727AD	LSP	19931001	0.00	136.50	6.50	REPAIR
9U	727AD	LSP	19931027	0.00	136.50	6.40	REPAIR
9U	727AD	LSP	19931124	0.00	136.50	6.50	REPAIR
9U	727AD	LSP	19931227	0.00	136.50	5.90	REPAIR
9U	727AD	LSP	19940127	0.00	136.50	6.00	REPAIR

9U	727AD	LSP	19940302	0.00	136.50	5.50	REPAIR
9U	727AD	LSP	19940323	0.00	136.50	5.40	REPAIR
9U	727AD	LSP	19940423	0.00	136.50	0.50	OFF
9U	727AD	LSP	19940523	0.00	136.50	0.50	OFF
9U	727AD	LSP	19940706	0.00	136.50	3.50	REPAIR
9U	727AD	LSP	19940803	0.00	136.50	4.50	REPAIR
9U	727AD	LSP	19940902	0.00	136.50	3.50	REPAIR
9U	727AD	LSP	19940929	0.00	136.50	4.30	REPAIR
9U	727AD	LSP	19941027	0.00	136.50	4.30	REPAIR
9U	727AD	LSP	19941130	0.00	136.50	4.40	REPAIR
9U	727AD	LSP	19941229	0.00	136.50	3.90	REPAIR
9U	727AD	LSP	19950426	0.00	136.50	3.50	REPAIR
9U	727AD	LSP	19950601	0.00	136.50	3.50	REPAIR
9U	727AD	LSP	19950628	0.00	136.50	3.90	REPAIR
9U	727AD	LSP	19950726	0.00	136.50	3.90	REPAIR
9U	727AD	LSP	19950901	0.00	136.50	3.70	REPAIR
9U	727AD	LSP	19950920	0.00	136.50	4.00	REPAIR
9U	727AD	LSP	19951101	0.00	136.50	0.00	REPAIR
9U	727AD	LSP	19960110	0.00	136.50	2.50	REPAIR
9U	727AD	LSP	19960208	0.00	136.50	2.70	REPAIR
9U	727AD	LSP	19960307	0.00	136.50	3.50	REPAIR
9U	727AD	LSP	19960403	0.00	136.50	4.30	REPAIR
9U	727AD	LSP	19960509	0.00	136.50	4.20	REPAIR
9U	727AD	LSP	19960829	0.00	136.50	4.30	
9U	727AD	LSP	19961107	0.00	136.50	9.50	
9U	727AD	LSP	19970106	0.00	136.50	4.50	
9U	727AD	LSP	19970131	0.00	136.50	4.50	
9U	727AD	LSP	19970205	0.00	136.50	4.50	
9U	727AD	LSP	19970306	0.00	136.50	11.50	
9U	727AD	LSP	19970318	0.00	136.50	10.50	
9U	727AD	LSP	19970325	0.00	136.50	10.50	
9U	727AD	LSP	19970417	0.00	136.50	10.60	Repair, dmdg cas
9U	727AD	LSP	19970515	0.00	136.50	5.00	Repair, dmdg cas
9U	727AD	LSP	19970604	0.00	136.50	4.10	Repair, dmdg cas
9U	727AD	LSP	19970610	0.00	136.50	5.60	Repair, dmdg cas
9U	727AD	LSP	19970618	0.00	136.50	4.30	Repair, dmdg cas
9U	727AD	LSP	19970626	0.00	136.50	14.00	Repair, dmdg cas
9U	727AD	LSP	19970707	0.00	136.50	13.50	Repair, dmdg cas
9U	727AD	LSP	19970717	0.00	136.50	14.30	Repair, dmdg cas
9U	727AD	LSP	19970722	0.00	136.50	13.50	Repair, dmdg cas
9U	727AD	LSP	19970813	0.00	136.50	15.50	Repair, dmdg cas
9U	727AD	LSP	19970904	0.00	136.50	13.50	Repair, dmdg cas
9U	727AD	LSP	19970912	0.00	136.50	16.50	Repair, dmdg cas
9U	727AD	LSP	19970922	0.00	136.50	6.50	Repair, dmdg cas
9U	727AD	LSP	19971002	0.00	136.50	6.40	Repair, dmdg cas
9U	727AD	LSP	19971009	0.00	136.50	6.50	Repair, dmdg cas
9U	727AD	LSP	19971022	0.00	136.50	5.50	Repair, dmdg cas

9U	727AD	LSP	19971030	0.00	136.50	4.50	Repair, dmdg cas
9U	727AD	LSP	19971105	0.00	136.50	4.70	Repair, dmdg cas
9U	727AD	LSP	19971120	0.00	136.50	4.50	Repair, dmdg cas
9U	727AD	LSP	19971203	0.00	136.50	4.70	Repair, dmdg cas
9U	727AD	LSP	19971210	0.00	136.50	5.50	Repair, dmdg cas
9U	727AD	LSP	19971231	0.00	136.50	5.80	Repair, dmdg cas
9U	727AD	LSP	19980108	0.00	136.50	5.50	Repair, dmdg cas
9U	727AD	LSP	19980116	0.00	136.50	5.50	Repair, dmdg cas
9U	727AD	LSP	19980121	0.00	136.50	5.50	Repair, dmdg cas
9U	727AD	LSP	19980128	0.00	136.50	5.50	Repair, dmdg cas
9U	727AD	LSP	19980304	0.00	136.50	7.50	Repair, dmdg cas
9U	727AD	LSP	19980319	0.00	136.50	10.50	Repair, dmdg cas
9U	727AD	LSP	19980401	0.00	136.50	10.50	Repair, dmdg cas
9U	727AD	LSP	19980430	0.00	136.50	10.50	Repair, dmdg
9U	727AD	LSP	19990817	0.00	136.50	11.50	Repair, dmdg
9U	727AD	LSP	20000508	0.00	136.50	8.30	Repair, dmdg
9U	727AD	LSP	20010308	0.00	136.50	9.10	Repair, dmdg
9U	727AD	LSP	20010314	0.00	136.50	9.10	Repair, dmdg
9U	727AD	LSP	20010321	0.00	136.50	8.90	Repair, dmdg
9U	727AD	LSP	20010404	0.00	136.50	8.70	Repair, dmdg
9U	727AD	LSP	20010411	0.00	136.50	3.70	Repair, dmdg
9U	727AD	LSP	20010419	0.00	136.50	8.50	Repair, dmdg
9U	727AD	LSP	20010503	0.00	136.50	8.60	Repair, dmdg
9U	727AD	LSP	20010510	0.00	136.50	8.70	Repair, dmdg
9U	727AD	LSP	20010518	0.00	136.50	8.50	Repair, dmdg
9U	727AD	LSP	20010531	0.00	136.50	8.00	Repair, dmdg
9U	727AD	LSP	20010606	0.00	136.50	1.50	Repair, dmdg
9U	727AD	LSP	20010613	0.00	136.50	1.50	Repair, dmdg
9U	727AD	LSP	20010705	0.00	136.50	1.50	Repair, dmdg
9U	727AD	LSP	20010726	0.00	136.50	136.50	Repair, dmdg
9U	727AD	LSP	20010810	0.00	136.50	1.50	Repair, dmdg
9U	727AD	LSP	20010926	0.00	136.50	136.50	Repair, dmdg
9U	727AD	LSP	20011011	0.00	136.50	136.50	Repair, dmdg
9U	727AD	LSP	20011023	0.00	136.50	136.50	Repair, dmdg
9U	727AD	LSP	20011031	0.00	136.50	2.50	Repair, dmdg
9U	727AD	LSP	20011107	0.00	136.50	2.50	Repair, dmdg
9U	727AD	LSP	20011204	0.00	136.50	16.80	Repair, dmdg
9U	727AD	LSP	20011210	0.00	136.50	16.50	Repair, dmdg
9U	727AD	LSP	20011220	0.00	136.50	16.70	Repair, dmdg
9U	727AD	LSP	20020115	0.00	136.50	16.70	Repair, dmdg
9U	727AD	LSP	20020204	0.00	136.50	8.30	Repair, dmdg
9U	727AD	LSP	20020221	0.00	136.50	0.00	Repair, dmdg
9U	727AD	LSP	20020227	0.00	136.50	0.00	Repair, dmdg
9U	727AD	LSP	20020307	0.00	136.50	8.30	Repair, dmdg
9U	727AD	LSP	20020314	0.00	136.50	0.00	Repair, dmdg
9U	727AD	LSP	20020404	0.00	136.50	8.70	Repair, dmdg
9U	727AD	LSP	20020425	0.00	136.50	8.70	Repair, dmdg



9U	727AD	LSP	20020508	0.00	136.50	8.70	Repair, dmdg
9U	727AD	LSP	20020522	0.00	136.50	8.70	Repair, dmdg
9U	727AD	LSP	20020606	0.00	136.50	9.00	Repair, dmdg
9U	727AD	LSP	20020612	0.00	136.50	8.60	Repair, dmdg
9U	727AD	LSP	20020711	0.00	136.50	8.10	Repair, dmdg
9U	727AD	LSP	20020726	0.00	136.50	8.20	Repair, dmdg
9U	727AD	LSP	20020826	0.00	136.50	8.40	Repair, dmdg
9U	727AD	LSP	20020905	0.00	136.50	9.50	Repair, dmdg
9U	727AD	LSP	20020920	0.00	136.50	9.80	Repair, dmdg
9U	727AD	LSP	20021004	0.00	136.50	2.20	Repair, dmdg
9U	727AD	LSP	20021018	0.00	136.50	3.10	Repair, dmdg
9U	727AD	LSP	20021104	0.00	136.50	3.10	Repair, dmdg
9U	727AD	LSP	20021126	0.00	136.50	6.30	Repair, dmdg
9U	727AD	LSP	20021207	0.00	136.50	8.90	Repair, dmdg
9U	727AD	LSP	20030108	0.00	136.50	-3.30	Repair, dmdg
9U	727AD	LSP	20030124	0.00	136.50	-4.00	Repair, dmdg
9U	727AD	LSP	20030210	0.00	136.50	-4.00	Repair, dmdg
9U	727AD	LSP	20030220	0.00	136.50	6.20	Repair, dmdg
9U	727AD	LSP	20030318	0.00	136.50	6.20	N/A
9U	727AD	LSP	20030325	0.00	136.50	6.20	Repair, dmdg
9U	727AD	LSP	20030507	0.00	136.50	136.50	INFO LEFT
9U	727AD	LSP	20030521	0.00	136.50	0.00	NO INFO 052103
9U	727AD	LSP	20030609	0.00	136.50	0.00	NO INFO 052103
9U	727AD	LSP	20030624	0.00	136.50	0.00	OFF
9U	727AD	LSP	20030710	0.00	136.50	5.50	OFF
9U	727AD	LSP	20030904	0.00	136.50	5.80	OFF
9U	727AD	LSP	20031010	0.00	136.50	13.50	OFF
9U	727AD	LSP	20031106	0.00	136.50	12.50	OFF
9U	727AD	LSP	20031211	0.00	136.50	10.50	OFF
9U	727AD	LSP	20031229	0.00	136.50	5.50	OFF
9U	727AD	LSP	20040114	0.00	136.50	6.20	OFF
9U	727AD	LSP	20040203	0.00	136.50	12.40	OFF
9U	727AD	LSP	20040211	0.00	136.50	11.50	OFF
9U	727AD	LSP	20040305	0.00	136.50	4.90	OFF
9U	727AD	LSP	20040401	0.00	136.50	6.30	OFF
9U	727AD	LSP	20040414	0.00	136.50	5.50	OFF
9U	727AD	LSP	20040513	0.00	136.50	5.30	OFF
9U	727AD	LSP	20040607	0.00	136.50	5.50	OFF
9U	727AD	LSP	20040701	0.00	136.50	5.50	OFF
9U	727AD	LSP	20040708	0.00	136.50	5.50	OFF
9U	727AD	LSP	20040715	0.00	136.50	5.50	CONDUCTOT PIPE
9U	727AD	LSP	20040812	0.00	136.50	1.50	CONDUCTOT PIPE
9U	727AD	LSP	20040824	0.00	136.50	2.50	CONDUCTOT PIPE
9U	727AD	LSP	20040903	0.00	136.50	2.90	CONDUCTOT PIPE
9U	727AD	LSP	20040929	0.00	136.50	2.50	CONDUCTOT PIPE
9U	727AD	LSP	20041006	0.00	136.50	2.50	CONDUCTOT PIPE
9U	727AD	LSP	20041104	0.00	136.50	2.50	CONDUCTOT PIPE

9U	727AD	LSP	20041222	0.00	136.50	2.50	CONDUCTOT PIPE
9U	727AD	LSP	20050414	0.00	136.50	2.50	CONDUCTOT PIPE
9U	727AD	LSP	20050421	0.00	136.50	2.50	CONDUCTOR PIPE
9U	727AD	LSP	20050504	0.00	136.50	8.50	CONDUCTOR PIPE
9U	727AD	LSP	20050526	0.00	136.50	8.30	CONDUCTOR PIPE
9U	727AD	LSP	20050609	0.00	136.50	5.10	CONDUCTOR PIPE
9U	727AD	LSP	20050616	0.00	136.50	2.90	CONDUCTOR PIPE
9U	727AD	LSP	20050627	0.00	136.50	2.90	CONDUCTOR PIPE
9U	727AD	LSP	20050728	0.00	136.50	2.90	CONDUCTOR PIPE
9U	727AD	LSP	20050804	0.00	136.50	2.50	CONDUCTOR PIPE
9U	727AD	LSP	20050817	0.00	136.50	2.90	CONDUCTOR PIPE
9U	727AD	LSP	20050824	0.00	136.50	3.30	CONDUCTOR PIPE
9U	727AD	LSP	20050906	0.00	136.50	3.30	CONDUCTOR PIPE
9U	727AD	LSP	20050919	0.00	136.50	2.90	CONDUCTOR PIPE
9U	727AD	LSP	20051031	0.00	136.50	2.90	CONDUCTOR PIPE
9U	727AD	LSP	20051117	0.00	136.50	2.50	CONDUCTOR PIPE
9U	727AD	LSP	20051201	0.00	136.50	4.50	CONDUCTOR PIPE
9U	727AD	LSP	20060106	0.00	136.50	4.50	CONDUCTOR PIPE
9U	727AD	LSP	20060118	0.00	136.50	3.50	CONDUCTOR PIPE
9U	727AD	LSP	20060302	0.00	136.50	3.50	Conductor pipe is
9U	727AD	LSP	20060425	0.00	136.50	4.50	Conductor pipe is
9U	727AD	LSP	20060508	0.00	136.50	3.50	Conductor pipe is
9U	727AD	LSP	20060802	0.00	136.50	2.50	Conductor pipe is
9U	727AD	LSP	20060814	0.00	136.50	2.50	Conductor pipe is
9U	727AD	LSP	20060907	0.00	136.50	3.50	Conductor pipe is
9U	727AD	LSP	20061012	0.00	136.50	3.50	Conductor pipe is
9U	727AD	LSP	20061019	0.00	136.50	3.50	Conductor pipe is
9U	727AD	LSP	20061206	0.00	136.50	3.50	Conductor pipe is
9U	727AD	LSP	20061226	0.00	136.50	3.50	Conductor pipe is
9U	727AD	LSP	20070104	0.00	136.50	3.50	Conductor pipe is
9U	727AD	LSP	20070110	0.00	136.50	4.50	
9U	727AD	LSP	20070131	0.00	136.50	4.50	Conductor pipe is
9U	727AD	LSP	20070208	0.00	136.50	4.50	Conductor pipe is
9U	727AD	LSP	20070215	0.00	136.50	4.50	
9U	727AD	LSP	20070228	0.00	136.50	4.50	
9U	727AD	LSP	20070314	0.00	136.50	4.50	
9U	727AD	LSP	20070319	0.00	136.50	4.50	
9U	727AD	LSP	20070502	0.00	136.50	4.50	
9U	727AD	LSP	20070511	0.00	136.50	4.50	
9U	727AD	LSP	20070516	0.00	136.50	4.50	
9U	727AD	LSP	20070606	0.00	136.50	4.50	
9U	727AD	LSP	20070613	0.00	136.50	4.50	Disassembled
9U	727AD	LSP	20070627	0.00	136.50	4.50	Disassembled
9U	727AD	LSP	20070706	0.00	136.50	4.50	
9U	727AD	LSP	20070711	0.00	136.50	4.50	Off for many years
9U	727AD	LSP	20070726	0.00	136.50	4.50	Off for many years
9U	727AD	LSP	20070801	0.00	136.50	4.50	

9U	727AD	LSP	20070816	0.00	136.50	4.50	Off for many years
9U	727AD	LSP	20070822	0.00	136.50	4.50	Off for many years
9U	727AD	LSP	20070913	0.00	136.50	4.50	Off for many years
9U	727AD	LSP	20070919	0.00	136.50	4.50	Off for many years
9U	727AD	LSP	20070926	0.00	136.50	4.50	Off for many years
9U	727AD	LSP	20071015	0.00	136.50	4.50	Off for many years
9U	727AD	LSP	20071018	0.00	136.50	4.50	Off for many years
9U	727AD	LSP	20071022	0.00	136.50	4.50	Off for many years
9U	727AD	LSP	20071031	0.00	136.50	4.50	Off for many years
9U	727AD	LSP	20071105	0.00	136.50	4.50	Off for many years
9U	727AD	LSP	20071113	0.00	136.50	4.50	Off for many years
9U	727AD	LSP	20071203	0.00	136.50	4.50	Off for many years
9U	727AD	LSP	20071206	0.00	136.50	4.50	Off many years
9U	727AD	LSP	20071212	0.00	136.50	4.50	Off for many years
9U	727AD	LSP	20071221	0.00	136.50	4.50	Off many years.
9U	727AD	LSP	20080108	0.00	136.50	4.50	Off many years
9U	727AD	LSP	20080116	0.00	136.50	4.50	Off many years
9U	727AD	LSP	20080123	0.00	136.50	4.50	Off many years
9U	727AD	LSP	20080131	0.00	136.50	4.50	Off many years
9U	727AD	LSP	20080206	0.00	136.50	4.50	Off many years
9U	727AD	LSP	20080213	0.00	136.50	4.50	
9U	727AD	LSP	20080221	0.00	136.50	4.50	
9U	727AD	LSP	20080227	0.05	136.50	18.50	Off many years
9U	727AD	LSP	20080312	0.00	136.50	4.50	Off many years
9U	727AD	LSP	20080402	0.00	136.50	4.50	Off Many Years
9U	727AD	LSP	20080408	0.00	136.50	4.50	Off many years
9U	727AD	LSP	20080416	0.00	136.50	4.50	Off many years
9U	727AD	LSP	20080430	0.00	136.50	4.50	Off many years
9U	727AD	LSP	20080514	0.00	136.50	5.00	
9U	727AD	LSP	20080521	0.00	136.50	4.50	
9U	727AD	LSP	20080630	0.00	136.50	5.00	
9U	727AD	LSP	20080714	0.00	136.50	5.00	
9U	727AD	LSP	20080717	0.00	136.50	4.50	
9U	727AD	LSP	20080723	0.00	136.50	4.50	Off many years
9U	727AD	LSP	20080812	0.00	136.50	4.50	Off many years
9U	727AD	LSP	20081103	0.00	136.50	3.50	Off many years
9U	727AD	LSP	20081210	0.00	136.50	3.50	off many years
9U	727AD	LSP	20081219	0.00	136.50	3.50	
9U	727AD	LSP	20090107	0.00	136.50	2.50	Off many years
9U	727AD	LSP	20090114	0.00	136.50	2.50	OFF MANY YEARS
9U	727AD	LSP	20090130	0.00	136.50	2.50	Off for years
9U	727AD	LSP	20090203	0.00	136.50	2.50	Off many years.
9U	727AD	LSP	20090212	0.00	136.50	2.50	Off many years.
9U	727AD	LSP	20090226	0.00	136.50	5.50	Off many years.
9U	727AD	LSP	20090312	0.00	136.50	2.50	Off many years.
9U	727AD	LSP	20090318	0.00	136.50	2.50	Off for many
9U	727AD	LSP	20090325	0.00	136.50	5.50	Disabled for years.

9U	727AD	LSP	20090401	0.00	136.50	12.50	Off for many yrs.
9U	727AD	LSP	20090408	0.00	136.50	12.50	Off for years.
9U	727AD	LSP	20090416	0.00	136.50	12.50	Off for many
9U	727AD	LSP	20090604	0.00	136.50	12.50	Off for many
9U	727AD	LSP	20090611	0.00	136.50	12.50	Off for many
9U	727AD	LSP	20090701	0.00	136.50	12.50	Off for many
9U	727AD	LSP	20090716	0.00	136.50	12.50	Off for many years
9U	727AD	LSP	20090722	0.00	136.50	12.50	Off for many yrs.
9U	727AD	LSP	20090812	0.00	136.50	12.50	Off for many yrs.
9U	727AD	LSP	20090826	0.00	136.50	12.50	Off for many
9U	727AD	LSP	20090917	0.00	136.50	12.50	Off for many yrs
9U	727AD	LSP	20090925	0.00	136.50	12.50	Off for many
9U	727AD	LSP	20091029	0.00	136.50	12.50	Off for many
9U	727AD	LSP	20091202	0.00	136.50	12.50	Off for many
9U	727AD	LSP	20091223	0.00	136.50	12.50	Off many years
9U	727AD	LSP	20100211	0.00	136.50	12.50	Off for many years
9U	727AD	LSP	20100218	0.00	136.50	12.50	Off for many years
9U	727AD	LSP	20100317	0.00	136.50		Off for many years
9U	727AD	LSP	20100422	0.00	136.50	12.50	Off for many years
9U	727AD	LSP	20100526	0.00	136.50		
9U	727AD	LSP	20100616	0.00	136.50	12.50	Off for many
9U	727AD	LSP	20100719	0.00	136.50	12.50	Off for many
9U	727AD	LSP	20100812	0.00	136.50	12.50	Off for many yrs
9U	727AD	LSP	20100915	0.00	136.50	12.50	No Base Plate
9U	727AD	LSP	20101021	0.00	136.50	12.50	
9U	727AD	LSP	20101123	0.00	136.50	12.50	No Base Plate
9U	727AD	LSP	20110106	0.00	136.50	12.50	No Base Plate
9U	727AD	LSP	20110202	0.00	136.50	12.50	
9U	727AD	LSP	20110317	0.00	136.50	12.50	
9U	727AD	LSP	20110418	0.00	136.50	12.50	No Base Plate
9U	727AD	LSP	20110518	0.00	136.50	5.50	Off for many years
9U	727AD	LSP	20110707	0.00	136.50	12.50	
9U	727AD	LSP	20110726	0.00	136.50		
9U	727AD	LSP	20110825	0.00	136.50		
9U	727AD	LSP	20110928	0.00	136.50		
9U	727AD	LSP	20111018	0.00	136.50		
9U	727AD	LSP	20111130	0.00	136.50		
9U	727AD	LSP	20111227	0.00	136.50		
9U	727AD	LSP	20120206	0.00	136.50		No Base Plate
9U	727AD	LSP	20120314	0.00	136.50		No Base Plate
9U	727AD	LSP	20120404	0.00	136.50		No Base Plate
9U	727AD	LSP	20120424	0.00	136.50		No Base Plate
9U	727AD	LSP	20120620	0.00	136.50		No Base Plate
9U	727AD	LSP	20120822	0.00	136.50		No Base Plate
9U	727AD	LSP	20121011	0.00	136.50		No Base Plate
9U	727AD	LSP	20121129	0.00	136.50		No Base Plate
9U	727AD	LSP	20130129	0.00	136.50		No Base Plate

9U	727AD	LSP	20130325	0.00	136.50		No Base Plate
9U	727AD	LSP	20130430	0.00	136.50		No Base Plate
9U	727AD	LSP	20130605	0.00	136.50		No Base Plate
9U	727AD	LSP	20130717	0.00	136.50		No Base Plate
9U	727AD	LSP	20130828	0.00	136.50		
9U	727AD	LSP	20131003	0.00	136.50		
9U	727AD	LSP	20131107	0.00	136.50		
9U	727AD	LSP	20131210	0.00	136.50		
9U	727AD	LSP	20140313	0.00	136.50		

## LACFCD Seawater Barrier database: Historical Injection Rate Information - Well 9J1

PROJ	FCD	AQUIF	Date	Q (CFS)	RP_EL	ELEV	REMARKS
9J1	726AY	LSP	19760130	0.50	141.00	3.50	
9J1	726AY	LSP	19760224	0.73	141.00	28.00	
9J1	726AY	LSP	19760330	0.75	141.00	54.00	
9J1	726AY	LSP	19760427	0.72	141.00	71.00	
9J1	726AY	LSP	19760526	0.74	141.00	74.00	
9J1	726AY	LSP	19760630	0.70	141.00	96.50	
9J1	726AY	LSP	19760729	0.68	141.00	102.70	
9J1	726AY	LSP	19760901	0.68	141.00	109.30	
9J1	726AY	LSP	19760930	0.68	141.00	104.90	
9J1	726AY	LSP	19761027	0.68	141.00	109.20	
9J1	726AY	LSP	19761124	0.68	141.00	116.00	
9J1	726AY	LSP	19761231	0.68	141.00	115.90	
9J1	726AY	LSP	19770126	0.70	141.00	121.00	
9J1	726AY	LSP	19770302	0.60	141.00	141.00	
9J1	726AY	LSP	19770330	0.60	141.00	145.60	
9J1	726AY	LSP	19770429	0.62	141.00	133.50	
9J1	726AY	LSP	19770602	0.63	141.00	137.90	
9J1	726AY	LSP	19770629	0.63	141.00	132.00	
9J1	726AY	LSP	19770727	0.62	141.00	139.20	
9J1	726AY	LSP	19770831	0.62	141.00	140.50	
9J1	726AY	LSP	19770928	0.59	141.00	147.90	
9J1	726AY	LSP	19771026	0.59	141.00	152.50	
9J1	726AY	LSP	19771130	0.55	141.00	157.20	
9J1	726AY	LSP	19771229	0.44	141.00	154.90	
9J1	726AY	LSP	19780127	0.42	141.00	169.90	
9J1	726AY	LSP	19780224	0.40	141.00	177.90	
9J1	726AY	LSP	19780331	0.30	141.00	164.80	
9J1	726AY	LSP	19780428	0.25	141.00	187.50	
9J1	726AY	LSP	19780602	0.22	141.00	184.80	
9J1	726AY	LSP	19780630	0.25	141.00	175.60	
9J1	726AY	LSP	19780706	0.00	141.00	0.00	REDEVELOPMENT
9J1	726AY	LSP	19780728	0.25	141.00	2.90	
9J1	726AY	LSP	19780901	0.33	141.00	7.00	
9J1	726AY	LSP	19780929	0.28	141.00	0.50	
9J1	726AY	LSP	19781103	0.30	141.00	19.50	
9J1	726AY	LSP	19781201	0.55	141.00	35.00	
9J1	726AY	LSP	19781229	0.55	141.00	44.10	
9J1	726AY	LSP	19790201	0.55	141.00	22.90	
9J1	726AY	LSP	19790216	0.00	141.00	0.00	OFF PRO LAYOFFS
9J1	726AY	LSP	19790228	0.50	141.00	36.70	
9J1	726AY	LSP	19790327	0.50	141.00	40.20	
9J1	726AY	LSP	19790427	0.50	141.00	54.80	
9J1	726AY	LSP	19790525	0.51	141.00	64.00	
9J1	726AY	LSP	19790529	0.00	141.00	0.00	TIE IN SEGMENT
9J1	726AY	LSP	19790711	0.00	141.00	6.80	

9J1	726AY	LSP	19790720	0.56	141.00	32.80	
9J1	726AY	LSP	19790830	0.75	141.00	37.60	
9J1	726AY	LSP	19790927	0.75	141.00	37.20	
9J1	726AY	LSP	19791102	0.75	141.00	49.30	
9J1	726AY	LSP	19791129	0.75	141.00	52.50	
9J1	726AY	LSP	19791227	0.76	141.00	63.60	
9J1	726AY	LSP	19800131	1.00	141.00	77.30	
9J1	726AY	LSP	19800227	0.98	141.00	89.60	
9J1	726AY	LSP	19800326	0.95	141.00	97.50	
9J1	726AY	LSP	19800501	0.92	141.00	109.90	
9J1	726AY	LSP	19800530	0.90	141.00	114.40	
9J1	726AY	LSP	19800626	0.89	141.00	120.40	
9J1	726AY	LSP	19800807	0.92	141.00	105.70	
9J1	726AY	LSP	19800904	0.95	141.00	106.10	
9J1	726AY	LSP	19801002	0.94	141.00	96.40	
9J1	726AY	LSP	19801030	0.93	141.00	112.00	
9J1	726AY	LSP	19801128	0.87	141.00	124.30	
9J1	726AY	LSP	19810102	0.79	141.00	147.90	
9J1	726AY	LSP	19810130	0.75	141.00	161.80	
9J1	726AY	LSP	19810226	0.67	141.00	173.80	
9J1	726AY	LSP	19810326	0.66	141.00	182.10	
9J1	726AY	LSP	19810430	0.59	141.00	187.60	
9J1	726AY	LSP	19810529	0.59	141.00	195.90	
9J1	726AY	LSP	19810702	0.65	141.00	187.20	
9J1	726AY	LSP	19810717	0.00	141.00	0.00	REPLACE VALVE
9J1	726AY	LSP	19810727	0.00	141.00	0.00	REDEVELOPMENT
9J1	726AY	LSP	19810731	0.63	141.00	72.70	
9J1	726AY	LSP	19810827	0.62	141.00	86.10	
9J1	726AY	LSP	19811001	0.73	141.00	112.60	
9J1	726AY	LSP	19811029	0.70	141.00	129.90	
9J1	726AY	LSP	19811125	0.67	141.00	143.30	
9J1	726AY	LSP	19811223	0.02	141.00	161.80	
9J1	726AY	LSP	19820128	0.61	141.00	166.40	
9J1	726AY	LSP	19820224	0.58	141.00	180.70	
9J1	726AY	LSP	19820407	0.54	141.00	187.10	
9J1	726AY	LSP	19820504	0.53	141.00	189.40	
9J1	726AY	LSP	19820602	0.54	141.00	196.30	
9J1	726AY	LSP	19820630	0.51	141.00	191.70	
9J1	726AY	LSP	19820728	0.50	141.00	198.70	
9J1	726AY	LSP	19820909	0.50	141.00	189.50	
9J1	726AY	LSP	19820921	0.52	141.00	187.20	
9J1	726AY	LSP	19821102	0.00	141.00	0.00	REDEVELOPMENT
9J1	726AY	LSP	19821201	0.52	141.00	9.00	
9J1	726AY	LSP	19830103	0.52	141.00	11.90	
9J1	726AY	LSP	19830128	0.52	141.00	0.00	FOAMY NO MEAS
9J1	726AY	LSP	19830225	0.52	141.00	32.20	
9J1	726AY	LSP	19830330	0.76	141.00	34.90	

9J1	726AY	LSP	19830429	1.01	141.00	42.90	
9J1	726AY	LSP	19830526	1.22	141.00	52.30	
9J1	726AY	LSP	19830624	1.28	141.00	58.00	
9J1	726AY	LSP	19830722	1.35	141.00	59.30	
9J1	726AY	LSP	19830803	0.00	141.00	0.00	REDEVELOPMENT
9J1	726AY	LSP	19830902	1.30	141.00	32.40	
9J1	726AY	LSP	19830929	1.33	141.00	48.40	
9J1	726AY	LSP	19831028	1.40	141.00	53.20	
9J1	726AY	LSP	19831108	0.00	141.00	0.00	PR STA. SECURED
9J1	726AY	LSP	19831208	1.37	141.00	55.50	
9J1	726AY	LSP	19840106	1.33	141.00	67.60	
9J1	726AY	LSP	19840202	1.37	141.00	74.80	
9J1	726AY	LSP	19840302	1.35	141.00	77.40	
9J1	726AY	LSP	19840328	1.36	141.00	78.00	
9J1	726AY	LSP	19840425	1.32	141.00	82.40	
9J1	726AY	LSP	19840523	1.37	141.00	83.00	
9J1	726AY	LSP	19840627	1.34	141.00	83.30	
9J1	726AY	LSP	19840724	1.39	141.00	79.70	
9J1	726AY	LSP	19840829	1.37	141.00	85.50	
9J1	726AY	LSP	19840926	1.33	141.00	88.00	
9J1	726AY	LSP	19841030	1.30	141.00	87.80	
9J1	726AY	LSP	19841129	1.30	141.00	90.50	
9J1	726AY	LSP	19841227	1.28	141.00	95.50	
9J1	726AY	LSP	19850130	1.25	141.00	103.10	
9J1	726AY	LSP	19850227	1.24	141.00	107.70	
9J1	726AY	LSP	19850328	1.20	141.00	121.70	
9J1	726AY	LSP	19850424	1.15	141.00	119.50	
9J1	726AY	LSP	19850530	1.09	141.00	137.10	
9J1	726AY	LSP	19850626	1.04	141.00	152.50	
9J1	726AY	LSP	19850716	0.00	141.00	0.00	REDEVELOPMENT
9J1	726AY	LSP	19850730	0.00	141.00	3.50	REDEVELOPMENT
9J1	726AY	LSP	19850828	1.11	141.00	94.00	
9J1	726AY	LSP	19850910	0.00	141.00	0.00	INST HYDROELE
9J1	726AY	LSP	19851001	0.00	141.00	-19.00	
9J1	726AY	LSP	19851030	0.00	141.00	-4.00	
9J1	726AY	LSP	19851204	1.10	141.00	102.00	
9J1	726AY	LSP	19860102	1.05	141.00	119.50	
9J1	726AY	LSP	19860129	1.04	141.00	127.80	
9J1	726AY	LSP	19860226	0.97	141.00	145.60	
9J1	726AY	LSP	19860402	1.05	141.00	124.90	
9J1	726AY	LSP	19860501	1.02	141.00	139.00	
9J1	726AY	LSP	19860528	0.98	141.00	145.60	
9J1	726AY	LSP	19860702	0.00	141.00	0.00	REDEVELOPMENT
9J1	726AY	LSP	19860703	0.00	141.00	0.00	REDEVELOPMENT
9J1	726AY	LSP	19860731	0.99	141.00	95.00	
9J1	726AY	LSP	19860827	0.94	141.00	106.40	
9J1	726AY	LSP	19861001	0.95	141.00	108.00	



9J1	726AY	LSP	19861030	0.92	141.00	112.20	
9J1	726AY	LSP	19861125	0.92	141.00	111.20	
9J1	726AY	LSP	19861231	0.97	141.00	122.00	
9J1	726AY	LSP	19870130	0.97	141.00	126.50	
9J1	726AY	LSP	19870225	0.95	141.00	128.80	
9J1	726AY	LSP	19870401	1.00	141.00	141.00	
9J1	726AY	LSP	19870429	1.01	141.00	141.00	
9J1	726AY	LSP	19870527	1.00	141.00	141.00	
9J1	726AY	LSP	19870701	0.97	141.00	141.00	
9J1	726AY	LSP	19870729	0.99	141.00	141.00	
9J1	726AY	LSP	19870814	0.00	141.00	0.00	REDEVELOPMENT
9J1	726AY	LSP	19870827	0.00	141.00	2.30	REDEVELOPMENT
9J1	726AY	LSP	19870930	0.98	141.00	87.90	
9J1	726AY	LSP	19871028	0.95	141.00	88.10	
9J1	726AY	LSP	19871125	1.00	141.00	105.80	
9J1	726AY	LSP	19871229	0.95	141.00	120.90	
9J1	726AY	LSP	19880127	0.92	141.00	125.30	
9J1	726AY	LSP	19880223	0.98	141.00	133.80	
9J1	726AY	LSP	19880330	0.98	141.00	141.00	
9J1	726AY	LSP	19880426	0.98	141.00	141.00	
9J1	726AY	LSP	19880524	0.98	141.00	145.60	
9J1	726AY	LSP	19880629	0.98	141.00	147.90	
9J1	726AY	LSP	19880726	0.95	141.00	145.60	
9J1	726AY	LSP	19880830	0.98	141.00	145.60	
9J1	726AY	LSP	19880929	1.00	141.00	141.00	
9J1	726AY	LSP	19881025	1.01	141.00	135.00	
9J1	726AY	LSP	19881130	0.99	141.00	143.30	
9J1	726AY	LSP	19881229	0.95	141.00	150.20	
9J1	726AY	LSP	19890125	0.93	141.00	154.80	
9J1	726AY	LSP	19890223	0.91	141.00	159.40	
9J1	726AY	LSP	19890329	0.90	141.00	164.10	
9J1	726AY	LSP	19890504	0.89	141.00	164.10	
9J1	726AY	LSP	19890601	0.89	141.00	168.70	
9J1	726AY	LSP	19890628	0.87	141.00	171.00	
9J1	726AY	LSP	19890802	0.90	141.00	141.90	
9J1	726AY	LSP	19890830	1.00	141.00	147.90	
9J1	726AY	LSP	19890928	0.00	141.00	0.00	REDEVELOPMENT
9J1	726AY	LSP	19891102	0.00	141.00	137.50	REPAIR
9J1	726AY	LSP	19891129	0.00	141.00	3.90	REPAIR
9J1	726AY	LSP	19900103	0.00	141.00	3.60	REPAIR
9J1	726AY	LSP	19900131	0.00	141.00	4.10	REPAIR
9J1	726AY	LSP	19900228	0.50	141.00	67.70	
9J1	726AY	LSP	19900404	0.90	141.00	109.10	
9J1	726AY	LSP	19900503	0.89	141.00	113.70	
9J1	726AY	LSP	19900601	0.89	141.00	110.40	LEAKY HEADER
9J1	726AY	LSP	19900705	0.89	141.00	118.00	
9J1	726AY	LSP	19900801	0.85	141.00	111.20	

9J1	726AY	LSP	19900830	0.84	141.00	112.50	
9J1	726AY	LSP	19901003	0.85	141.00	104.10	
9J1	726AY	LSP	19901031	0.95	141.00	126.70	
9J1	726AY	LSP	19901205	0.93	141.00	136.10	
9J1	726AY	LSP	19910103	0.92	141.00	137.00	
9J1	726AY	LSP	19910130	1.00	141.00	159.50	
9J1	726AY	LSP	19910227	0.98	141.00	159.50	
9J1	726AY	LSP	19910403	0.99	141.00	152.50	
9J1	726AY	LSP	19910501	0.95	141.00	133.50	
9J1	726AY	LSP	19910612	0.00	141.00	0.00	CAR ON WELL
9J1	726AY	LSP	19910714	0.00	141.00	0.00	CAR ON WELL 9107
9J1	726AY	LSP	19910807	0.00	141.00	0.00	UNABLE TO MEAS.
9J1	726AY	LSP	19910906	0.96	141.00	123.80	
9J1	726AY	LSP	19910930	0.95	141.00	23.50	
9J1	726AY	LSP	19911030	0.93	141.00	127.40	
9J1	726AY	LSP	19911127	0.92	141.00	131.00	
9J1	726AY	LSP	19911226	0.87	141.00	138.00	
9J1	726AY	LSP	19920127	0.80	141.00	157.10	
9J1	726AY	LSP	19920227	0.78	141.00	161.80	
9J1	726AY	LSP	19920408	0.78	141.00	145.60	
9J1	726AY	LSP	19920429	0.75	141.00	145.60	
9J1	726AY	LSP	19920603	0.75	141.00	143.30	
9J1	726AY	LSP	19920701	0.78	141.00	143.30	
9J1	726AY	LSP	19920805	0.80	141.00	145.60	
9J1	726AY	LSP	19920902	0.75	141.00	150.20	
9J1	726AY	LSP	19921002	0.75	141.00	145.60	
9J1	726AY	LSP	19921028	0.79	141.00	141.00	
9J1	726AY	LSP	19921203	0.72	141.00	147.90	
9J1	726AY	LSP	19921217	0.71	141.00	157.20	
9J1	726AY	LSP	19930128	0.65	141.00	166.40	
9J1	726AY	LSP	19930223	0.00	141.00	0.00	CLOGGED MS TUBE
9J1	726AY	LSP	19930331	0.65	141.00	141.00	
9J1	726AY	LSP	19930428	0.65	141.00	145.60	
9J1	726AY	LSP	19930603	0.64	141.00	150.20	
9J1	726AY	LSP	19930630	0.64	141.00	145.60	
9J1	726AY	LSP	19930728	0.65	141.00	141.00	
9J1	726AY	LSP	19930826	0.65	141.00	141.00	
9J1	726AY	LSP	19931001	0.68	141.00	141.00	
9J1	726AY	LSP	19931026	0.68	141.00	141.00	
9J1	726AY	LSP	19931124	0.65	141.00	154.80	
9J1	726AY	LSP	19931227	0.65	141.00	159.40	
9J1	726AY	LSP	19940127	0.65	141.00	157.10	
9J1	726AY	LSP	19940302	0.64	141.00	157.10	
9J1	726AY	LSP	19940323	0.63	141.00	161.80	
9J1	726AY	LSP	19940423	0.00	141.00	7.00	OFF
9J1	726AY	LSP	19940523	0.00	141.00	7.00	OFF
9J1	726AY	LSP	19940630	0.60	141.00	141.00	

9J1	726AY	LSP	19940803	0.64	141.00	143.30	
9J1	726AY	LSP	19940902	0.60	141.00	141.00	
9J1	726AY	LSP	19940929	0.59	141.00	143.30	
9J1	726AY	LSP	19941103	0.59	141.00	143.30	
9J1	726AY	LSP	19941130	0.55	141.00	147.90	
9J1	726AY	LSP	19941229	0.55	141.00	157.10	
9J1	726AY	LSP	19950120	0.00	141.00	8.00	
9J1	726AY	LSP	19950320	0.00	141.00	8.00	
9J1	726AY	LSP	19950426	0.51	141.00	132.10	
9J1	726AY	LSP	19950601	0.52	141.00	136.00	
9J1	726AY	LSP	19950628	0.51	141.00	128.40	
9J1	726AY	LSP	19950726	0.51	141.00	132.90	
9J1	726AY	LSP	19950831	0.51	141.00	137.00	
9J1	726AY	LSP	19950920	0.51	141.00	134.80	
9J1	726AY	LSP	19951101	0.50	141.00	137.00	VERIFY WSELV?
9J1	726AY	LSP	19951213	0.00	141.00	0.00	NO WS EL
9J1	726AY	LSP	19951227	0.38	141.00	0.00	NO WS EL
9J1	726AY	LSP	19960105	0.36	141.00	106.50	
9J1	726AY	LSP	19960110	0.36	141.00	110.90	
9J1	726AY	LSP	19960118	0.35	141.00	119.20	
9J1	726AY	LSP	19960123	0.35	141.00	119.90	
9J1	726AY	LSP	19960201	0.34	141.00	122.00	
9J1	726AY	LSP	19960208	0.35	141.00	125.90	
9J1	726AY	LSP	19960214	0.34	141.00	128.00	Q=.50
9J1	726AY	LSP	19960227	0.49	141.00	154.80	
9J1	726AY	LSP	19960306	0.49	141.00	161.70	
9J1	726AY	LSP	19960319	0.55	141.00	175.60	
9J1	726AY	LSP	19960326	0.55	141.00	173.30	
9J1	726AY	LSP	19960403	0.53	141.00	180.20	
9J1	726AY	LSP	19960409	0.51	141.00	182.50	
9J1	726AY	LSP	19960416	0.50	141.00	177.90	PP=20, Q=.52
9J1	726AY	LSP	19960423	0.53	141.00	168.60	
9J1	726AY	LSP	19960501	0.50	141.00	175.60	
9J1	726AY	LSP	19960509	0.50	141.00	175.60	
9J1	726AY	LSP	19960514	0.50	141.00	175.60	
9J1	726AY	LSP	19960523	0.50	141.00	172.30	
9J1	726AY	LSP	19960530	0.50	141.00	175.60	
9J1	726AY	LSP	19960605	0.49	141.00	177.90	
9J1	726AY	LSP	19960612	0.50	141.00	177.90	
9J1	726AY	LSP	19960618	0.50	141.00	177.90	
9J1	726AY	LSP	19960627	0.50	141.00	175.60	
9J1	726AY	LSP	19960731	0.52	141.00	168.70	
9J1	726AY	LSP	19960807	0.52	141.00	168.70	
9J1	726AY	LSP	19960814	0.51	141.00	171.00	
9J1	726AY	LSP	19960829	0.50	141.00	171.00	
9J1	726AY	LSP	19960910	0.52	141.00	166.40	
9J1	726AY	LSP	19960917	0.49	141.00	141.00	

9J1	726AY	LSP	19960919	0.00	141.00	8.00	
9J1	726AY	LSP	19960924	0.00	141.00	8.00	
9J1	726AY	LSP	19960927	0.25	141.00	15.00	Well On
9J1	726AY	LSP	19961010	0.42	141.00	120.10	
9J1	726AY	LSP	19961016	0.49	141.00	125.00	
9J1	726AY	LSP	19961023	0.48	141.00	131.80	
9J1	726AY	LSP	19961106	0.47	141.00	134.20	
9J1	726AY	LSP	19961120	0.46	141.00	138.80	
9J1	726AY	LSP	19961204	0.47	141.00	147.90	
9J1	726AY	LSP	19961220	0.44	141.00	157.20	
9J1	726AY	LSP	19970106	0.43	141.00	161.80	
9J1	726AY	LSP	19970130	0.40	141.00	166.40	Q=0.43/0.40cfs
9J1	726AY	LSP	19970205	0.40	141.00	166.40	
9J1	726AY	LSP	19970213	0.40	141.00	166.40	
9J1	726AY	LSP	19970220	0.40	141.00	168.70	
9J1	726AY	LSP	19970227	0.40	141.00	168.70	
9J1	726AY	LSP	19970306	0.40	141.00	168.70	
9J1	726AY	LSP	19970318	0.40	141.00	168.70	
9J1	726AY	LSP	19970325	0.40	141.00	168.70	
9J1	726AY	LSP	19970402	0.00	141.00	141.00	
9J1	726AY	LSP	19970417	0.40	141.00	126.00	
9J1	726AY	LSP	19970423	0.40	141.00	125.50	
9J1	726AY	LSP	19970429	0.41	141.00	125.50	
9J1	726AY	LSP	19970515	0.41	141.00	116.00	
9J1	726AY	LSP	19970603	0.10	141.00	116.00	Q=.41/0.10 5/22
9J1	726AY	LSP	19970610	0.10	141.00	116.00	
9J1	726AY	LSP	19970618	0.11	141.00	116.00	
9J1	726AY	LSP	19970626	0.11	141.00	116.00	Tape stuck
9J1	726AY	LSP	19970707	0.12	141.00	116.00	Tape stuck
9J1	726AY	LSP	19970717	0.11	141.00	113.00	Tape stuck
9J1	726AY	LSP	19970722	0.11	141.00	116.00	Tape stuck
9J1	726AY	LSP	19970813	0.11	141.00	116.00	Tape stuck
9J1	726AY	LSP	19970904	0.12	141.00	116.00	Tape stuck
9J1	726AY	LSP	19970922	0.12	141.00	116.00	Tape stuck
9J1	726AY	LSP	19971001	0.15	141.00	116.00	Tape stuck
9J1	726AY	LSP	19971009	0.14	141.00	116.00	Tape stuck
9J1	726AY	LSP	19971022	0.10	141.00	116.00	Tape stuck
9J1	726AY	LSP	19971028	0.10	141.00	116.00	Tape stuck
9J1	726AY	LSP	19971105	0.10	141.00	24.00	
9J1	726AY	LSP	19971120	0.05	141.00	24.00	
9J1	726AY	LSP	19971203	0.05	141.00	24.00	Tape gets stuck
9J1	726AY	LSP	19971210	0.05	141.00	24.00	Tape gets stuck
9J1	726AY	LSP	19971231	0.05	141.00	24.00	
9J1	726AY	LSP	19980108	0.05	141.00	24.00	
9J1	726AY	LSP	19980116	0.05	141.00	24.00	
9J1	726AY	LSP	19980121	0.02	141.00	24.00	
9J1	726AY	LSP	19980128	0.02	141.00	24.00	

9J1	726AY	LSP	19980213	0.05	141.00	24.00	0.02\0.05cfs-02\
9J1	726AY	LSP	19980226	0.02	141.00	24.00	Q=0.02\0.05cfs-0
9J1	726AY	LSP	19980304	0.03	141.00	24.00	Q=0.02\0.05cfs-0
9J1	726AY	LSP	19980319	0.03	141.00	24.00	.02/.05 02/13
9J1	726AY	LSP	19980331	0.10	141.00	141.00	
9J1	726AY	LSP	19980430	0.05	141.00	141.00	flooded
9J1	726AY	LSP	19980615	0.09	141.00	10.00	DRILLERS NEED REPAIR
9J1	726AY	LSP	19980622	0.10	141.00	10.00	DRILLERS NEED REPAIR
9J1	726AY	LSP	19980624	0.10	141.00	10.00	DRILLERS NEED REPAIR
9J1	726AY	LSP	19980701	0.20	141.00	10.00	DRILLERS NEED REPAIR
9J1	726AY	LSP	19980706	0.20	141.00	10.00	obst.@ 44'
9J1	726AY	LSP	19980723	0.00	141.00	141.00	IN REPAIR
9J1	726AY	LSP	19980817	0.25	141.00	6.00	IN REPAIR
9J1	726AY	LSP	19980915	0.23	141.00	61.00	IN REPAIR
9J1	726AY	LSP	19980928	0.40	141.00	57.20	IN REPAIR
9J1	726AY	LSP	19981005	0.39	141.00	59.00	
9J1	726AY	LSP	19981015	0.38	141.00	86.00	
9J1	726AY	LSP	19981029	0.38	141.00	93.00	
9J1	726AY	LSP	19981119	0.37	141.00	103.00	
9J1	726AY	LSP	19981125	0.37	141.00	101.00	
9J1	726AY	LSP	19981203	0.38	141.00	102.50	
9J1	726AY	LSP	19981217	0.36	141.00	102.30	
9J1	726AY	LSP	19981224	0.36	141.00	101.00	
9J1	726AY	LSP	19981228	0.38	141.00	101.00	
9J1	726AY	LSP	19990104	0.36	141.00	102.00	
9J1	726AY	LSP	19990111	0.36	141.00	102.00	
9J1	726AY	LSP	19990125	0.36	141.00	99.00	
9J1	726AY	LSP	19990222	0.35	141.00	98.00	
9J1	726AY	LSP	19990308	0.34	141.00	95.00	
9J1	726AY	LSP	19990316	0.36	141.00	94.00	
9J1	726AY	LSP	19990329	0.34	141.00	91.00	
9J1	726AY	LSP	19990412	0.35	141.00	93.00	
9J1	726AY	LSP	19990504	0.34	141.00	94.00	
9J1	726AY	LSP	19990607	0.36	141.00	83.00	
9J1	726AY	LSP	19990614	0.33	141.00	83.00	
9J1	726AY	LSP	19990722	0.34	141.00	82.00	
9J1	726AY	LSP	19990810	0.45	141.00	82.00	
9J1	726AY	LSP	19990817	0.44	141.00	83.00	
9J1	726AY	LSP	19990823	0.43	141.00	101.00	
9J1	726AY	LSP	19990830	0.43	141.00	104.00	
9J1	726AY	LSP	19990908	0.43	141.00	104.00	
9J1	726AY	LSP	19991021	0.00	141.00	2.00	So. Ca line H2O leak
9J1	726AY	LSP	19991025	0.25	141.00	2.00	
9J1	726AY	LSP	19991104	0.40	141.00	91.00	
9J1	726AY	LSP	19991122	0.40	141.00	91.00	
9J1	726AY	LSP	19991227	0.40	141.00	96.00	
9J1	726AY	LSP	20000203	0.38	141.00	100.00	

9J1	726AY	LSP	20000301	0.38	141.00	104.00	
9J1	726AY	LSP	20000313	0.38	141.00	101.00	
9J1	726AY	LSP	20000424	0.00	141.00	3.50	
9J1	726AY	LSP	20000508	0.00	141.00	3.40	
9J1	726AY	LSP	20000614	0.40	141.00	3.50	Start Up Q=0.20
9J1	726AY	LSP	20000629	0.39	141.00	73.20	Start Up Q=0.20
9J1	726AY	LSP	20000725	0.50	141.00	78.20	Q=0.40/0.50
9J1	726AY	LSP	20000811	0.50	141.00	82.60	
9J1	726AY	LSP	20000830	0.49	141.00	98.50	
9J1	726AY	LSP	20000918	0.48	141.00	97.80	
9J1	726AY	LSP	20001006	0.47	141.00	98.50	
9J1	726AY	LSP	20001025	0.47	141.00	104.50	
9J1	726AY	LSP	20001129	0.60	141.00	119.00	RS Q=0.47 TO 0.60
9J1	726AY	LSP	20001211	0.59	141.00	134.00	
9J1	726AY	LSP	20001214	0.57	141.00	134.00	
9J1	726AY	LSP	20010308	0.30	141.00	169.00	
9J1	726AY	LSP	20010314	0.30	141.00	141.00	
9J1	726AY	LSP	20010321	0.31	141.00	141.00	
9J1	726AY	LSP	20010404	0.30	141.00	98.20	
9J1	726AY	LSP	20010411	0.29	141.00	102.10	
9J1	726AY	LSP	20010419	0.29	141.00	102.10	
9J1	726AY	LSP	20010503	0.28	141.00	100.20	
9J1	726AY	LSP	20010509	0.29	141.00	105.80	
9J1	726AY	LSP	20010518	0.30	141.00	103.00	0
9J1	726AY	LSP	20010531	0.28	141.00	98.00	
9J1	726AY	LSP	20010605	0.29	141.00	100.00	
9J1	726AY	LSP	20010613	0.29	141.00	96.70	
9J1	726AY	LSP	20010705	0.29	141.00	103.80	
9J1	726AY	LSP	20010725	0.30	141.00	103.80	
9J1	726AY	LSP	20010809	0.28	141.00	99.50	
9J1	726AY	LSP	20010926	0.28	141.00	106.10	
9J1	726AY	LSP	20011011	0.28	141.00	106.20	
9J1	726AY	LSP	20011019	0.30	141.00	91.00	0
9J1	726AY	LSP	20011031	0.50	141.00	128.10	0
9J1	726AY	LSP	20011107	0.50	141.00	128.20	
9J1	726AY	LSP	20011128	0.49	141.00	91.00	Under Pressure
9J1	726AY	LSP	20011220	0.49	141.00	91.00	
9J1	726AY	LSP	20020114	0.48	141.00	109.46	
9J1	726AY	LSP	20020131	0.48	141.00	109.46	
9J1	726AY	LSP	20020221	0.23	141.00	122.60	
9J1	726AY	LSP	20020227	0.24	141.00	124.90	
9J1	726AY	LSP	20020305	0.48	141.00	122.60	
9J1	726AY	LSP	20020314	0.48	141.00	123.40	
9J1	726AY	LSP	20020404	0.47	141.00	122.60	
9J1	726AY	LSP	20020425	0.46	141.00	122.60	
9J1	726AY	LSP	20020507	0.46	141.00	127.20	
9J1	726AY	LSP	20020522	0.45	141.00	118.00	

9J1	726AY	LSP	20020606	0.45	141.00	118.00	
9J1	726AY	LSP	20020612	0.46	141.00	141.00	water in mes tube
9J1	726AY	LSP	20020711	0.46	141.00	141.00	water in mes tube/WLFL
9J1	726AY	LSP	20020726	0.46	141.00	141.00	water in mes tube/WLFL
9J1	726AY	LSP	20020826	0.46	141.00	134.10	water in mes tube/WLFL
9J1	726AY	LSP	20020905	0.46	141.00	134.10	WELL FLD
9J1	726AY	LSP	20020920	0.47	141.00	134.10	
9J1	726AY	LSP	20021003	0.22	141.00	141.00	NO PSI WELL UNDER
9J1	726AY	LSP	20021018	0.46	141.00	140.00	NO PSI WELL UNDER
9J1	726AY	LSP	20021104	0.46	141.00	140.00	NO PSI WELL UNDER
9J1	726AY	LSP	20021126	0.44	141.00	141.00	NO PSI WATER IN FLOW
9J1	726AY	LSP	20021204	0.44	141.00	141.00	NO PSI WATER IN FLOW
9J1	726AY	LSP	20030108	0.41	141.00	131.80	NO PSI WATER IN FLOW
9J1	726AY	LSP	20030123	0.44	141.00	141.00	
9J1	726AY	LSP	20030210	0.44	141.00	141.00	
9J1	726AY	LSP	20030220	0.44	141.00	141.00	
9J1	726AY	LSP	20030318	0.45	141.00	141.00	0
9J1	726AY	LSP	20030325	0.44	141.00	141.00	0
9J1	726AY	LSP	20030507	0.45	141.00	141.00	BAD RD
9J1	726AY	LSP	20030521	0.45	141.00	141.00	BAD RD
9J1	726AY	LSP	20030609	0.45	141.00	76.00	
9J1	726AY	LSP	20030624	0.46	141.00	76.00	
9J1	726AY	LSP	20030710	0.46	141.00	89.60	
9J1	726AY	LSP	20030904	0.28	141.00	119.60	0
9J1	726AY	LSP	20031009	0.46	141.00	116.60	
9J1	726AY	LSP	20031106	0.46	141.00	107.00	
9J1	726AY	LSP	20031211	0.47	141.00	105.00	
9J1	726AY	LSP	20031229	0.00	141.00	0.00	DRILLERS ON WELL
9J1	726AY	LSP	20040114	0.00	141.00	0.00	DRILLERS ON WELL
9J1	726AY	LSP	20040202	0.00	141.00	153.00	DRILLERS ON WELL
9J1	726AY	LSP	20040211	0.00	141.00	3.50	DRILLERS ON WELL
9J1	726AY	LSP	20040305	0.14	141.00	20.00	
9J1	726AY	LSP	20040401	0.14	141.00	39.00	
9J1	726AY	LSP	20040414	0.14	141.00	28.00	
9J1	726AY	LSP	20040513	0.14	141.00	30.00	
9J1	726AY	LSP	20040603	0.14	141.00	30.30	
9J1	726AY	LSP	20040701	0.12	141.00	28.10	
9J1	726AY	LSP	20040708	0.14	141.00	27.20	
9J1	726AY	LSP	20040714	0.14	141.00	27.20	
9J1	726AY	LSP	20040812	0.00	141.00	-19.00	WELL DISASSEMBLE
9J1	726AY	LSP	20040824	0.00	141.00	-24.20	WELL DISASSEMBLE
9J1	726AY	LSP	20040902	0.11	141.00		MS TUBE BLOCKED
9J1	726AY	LSP	20040928	0.11	141.00	0.00	MS TUBE BLOCKED
9J1	726AY	LSP	20041006	0.10	141.00	0.00	MS TUBE BLOCKED
9J1	726AY	LSP	20041104	0.10	141.00	0.00	
9J1	726AY	LSP	20041221	0.10	141.00	0.00	MS TUBE BLOCKED
9J1	726AY	LSP	20050414	0.00	141.00	0.00	MS TUBE BLOCKED

9J1	726AY	LSP	20050421	0.00	141.00	0.00	MS TUBE BLOCKED
9J1	726AY	LSP	20050504	0.00	141.00	0.00	MS TUBE BLOCKED
9J1	726AY	LSP	20050526	0.00	141.00	0.00	MS TUBE BLOCKED
9J1	726AY	LSP	20050609	0.00	141.00	0.00	MS TUBE BLOCKED
9J1	726AY	LSP	20050616	0.00	141.00	2.00	MS TUBE BLOCKED
9J1	726AY	LSP	20050627	0.00	141.00	2.90	MS TUBE BLOCKED
9J1	726AY	LSP	20050727	0.46	141.00	105.00	
9J1	726AY	LSP	20050803	0.46	141.00	105.00	
9J1	726AY	LSP	20050817	0.48	141.00	106.00	
9J1	726AY	LSP	20050824	0.46	141.00	105.00	
9J1	726AY	LSP	20050902	0.48	141.00	82.00	
9J1	726AY	LSP	20050919	0.48	141.00	82.40	
9J1	726AY	LSP	20051031	0.48	141.00	82.20	
9J1	726AY	LSP	20051116	0.46	141.00	68.00	WELL FLOODED
9J1	726AY	LSP	20051201	0.46	141.00	70.00	
9J1	726AY	LSP	20060106	0.46	141.00	70.00	
9J1	726AY	LSP	20060118	0.46	141.00	70.00	
9J1	726AY	LSP	20060302	0.40	141.00	68.00	
9J1	726AY	LSP	20060425	0.40	141.00	69.00	
9J1	726AY	LSP	20060508	0.50	141.00	91.00	Raised Q to 0.50
9J1	726AY	LSP	20060802	0.50	141.00	67.00	
9J1	726AY	LSP	20060814	0.52	141.00	67.00	
9J1	726AY	LSP	20060907	0.48	141.00	57.00	Adjust from .30 - .48 Q
9J1	726AY	LSP	20061012	0.49	141.00	65.00	
9J1	726AY	LSP	20061018	0.47	141.00	66.00	
9J1	726AY	LSP	20061206	0.46	141.00	69.00	
9J1	726AY	LSP	20061226	0.46	141.00	69.00	
9J1	726AY	LSP	20070104	0.46	141.00	69.00	
9J1	726AY	LSP	20070110	0.46	141.00	70.00	
9J1	726AY	LSP	20070131	0.46	141.00	70.00	
9J1	726AY	LSP	20070208	0.46	141.00	70.00	
9J1	726AY	LSP	20070215	0.46	141.00	70.00	
9J1	726AY	LSP	20070228	0.46	141.00	70.00	
9J1	726AY	LSP	20070314	0.46	141.00	70.00	
9J1	726AY	LSP	20070322	0.46	141.00		Water going into
9J1	726AY	LSP	20070502	0.46	141.00		Flooded
9J1	726AY	LSP	20070511	0.46	141.00		Flooded
9J1	726AY	LSP	20070516	0.46	141.00		
9J1	726AY	LSP	20070606	0.45	141.00		
9J1	726AY	LSP	20070613	0.45	141.00		
9J1	726AY	LSP	20070627	0.45	141.00		Flooded
9J1	726AY	LSP	20070706	0.45	141.00	70.00	
9J1	726AY	LSP	20070711	0.45	141.00	70.00	
9J1	726AY	LSP	20070726	0.45	141.00	70.00	
9J1	726AY	LSP	20070801	0.45	141.00	70.00	
9J1	726AY	LSP	20070816	0.45	141.00	71.00	
9J1	726AY	LSP	20070822	0.45	141.00	71.00	



9J1	726AY	LSP	20070913	0.45	141.00	71.00
9J1	726AY	LSP	20070919	0.45	141.00	71.00
9J1	726AY	LSP	20070926	0.45	141.00	71.00
9J1	726AY	LSP	20071015	0.45	141.00	71.00
9J1	726AY	LSP	20071018	0.45	141.00	71.00
9J1	726AY	LSP	20071022	0.45	141.00	71.00
9J1	726AY	LSP	20071031	0.45	141.00	71.00
9J1	726AY	LSP	20071105	0.45	141.00	71.00
9J1	726AY	LSP	20071113	0.46	141.00	71.00
9J1	726AY	LSP	20071203	0.46	141.00	71.00
9J1	726AY	LSP	20071206	0.46	141.00	71.00
9J1	726AY	LSP	20071212	0.46	141.00	71.00
9J1	726AY	LSP	20071221	0.46	141.00	71.00
9J1	726AY	LSP	20080108	0.46	141.00	71.00
9J1	726AY	LSP	20080116	0.46	141.00	71.00
9J1	726AY	LSP	20080123	0.00	141.00	42.00
9J1	726AY	LSP	20080131	0.00	141.00	42.00
9J1	726AY	LSP	20080206	0.00	141.00	42.00
9J1	726AY	LSP	20080213	0.00	141.00	42.00
9J1	726AY	LSP	20080221	0.46	141.00	113.00
9J1	726AY	LSP	20080227	0.46	141.00	113.00
9J1	726AY	LSP	20080312	0.46	141.00	116.00
9J1	726AY	LSP	20080402	0.46	141.00	116.00
9J1	726AY	LSP	20080408	0.46	141.00	116.00
9J1	726AY	LSP	20080416	0.46	141.00	116.00
9J1	726AY	LSP	20080430	0.05	141.00	33.00
9J1	726AY	LSP	20080514	0.05	141.00	33.00
9J1	726AY	LSP	20080521	0.05	141.00	33.00
9J1	726AY	LSP	20080630	0.08	141.00	35.00
9J1	726AY	LSP	20080714	0.08	141.00	35.00
9J1	726AY	LSP	20080717	0.10	141.00	35.00
9J1	726AY	LSP	20080723	0.10	141.00	35.00
9J1	726AY	LSP	20080812	0.05	141.00	33.00
9J1	726AY	LSP	20081030	0.10	141.00	35.00
9J1	726AY	LSP	20081210	0.05	141.00	41.00
9J1	726AY	LSP	20081219	0.05	141.00	41.00
9J1	726AY	LSP	20090106	0.05	141.00	42.00
9J1	726AY	LSP	20090114	0.05	141.00	42.00
9J1	726AY	LSP	20090130	0.15	141.00	42.00
9J1	726AY	LSP	20090203	0.15	141.00	79.00
9J1	726AY	LSP	20090212	0.18	141.00	81.00
9J1	726AY	LSP	20090226	0.18	141.00	86.00
9J1	726AY	LSP	20090312	0.16	141.00	88.00
9J1	726AY	LSP	20090318	0.19	141.00	92.00
9J1	726AY	LSP	20090325	0.18	141.00	93.00
9J1	726AY	LSP	20090401	0.18	141.00	98.00
9J1	726AY	LSP	20090408	0.20	141.00	99.00

9J1	726AY	LSP	20090416	0.21	141.00	100.00	
9J1	726AY	LSP	20090604	0.10	141.00	52.00	
9J1	726AY	LSP	20090611	0.10	141.00	54.00	
9J1	726AY	LSP	20090701	0.20	141.00	83.00	
9J1	726AY	LSP	20090716	0.20	141.00	82.00	
9J1	726AY	LSP	20090722	0.22	141.00	84.00	
9J1	726AY	LSP	20090812	0.22	141.00	88.00	
9J1	726AY	LSP	20090826	0.22	141.00	89.00	
9J1	726AY	LSP	20090917	0.25	141.00	92.00	
9J1	726AY	LSP	20090925	0.25	141.00	92.00	
9J1	726AY	LSP	20091029	0.25	141.00	100.00	
9J1	726AY	LSP	20091202	0.25	141.00	100.00	
9J1	726AY	LSP	20091223	0.25	141.00	88.00	
9J1	726AY	LSP	20100211	0.30	141.00	101.00	
9J1	726AY	LSP	20100218	0.30	141.00	100.00	
9J1	726AY	LSP	20100317	0.35	141.00	116.00	
9J1	726AY	LSP	20100421	0.42	141.00	139.00	
9J1	726AY	LSP	20100526	0.40	141.00	129.00	
9J1	726AY	LSP	20100616	0.40	141.00	124.00	
9J1	726AY	LSP	20100719	0.45	141.00	127.00	
9J1	726AY	LSP	20100812	0.50	141.00	130.00	
9J1	726AY	LSP	20100915	0.55	141.00	119.00	
9J1	726AY	LSP	20101020	0.60	141.00	116.00	
9J1	726AY	LSP	20101123	0.65	141.00	121.00	
9J1	726AY	LSP	20110106	0.65	141.00	117.00	
9J1	726AY	LSP	20110202	0.70	141.00	124.00	
9J1	726AY	LSP	20110317	0.00	141.00		Drillers on well
9J1	726AY	LSP	20110418	0.40	141.00	62.00	
9J1	726AY	LSP	20110518	0.45	141.00	80.00	
9J1	726AY	LSP	20110707	0.45	141.00	82.00	
9J1	726AY	LSP	20110726	0.50	141.00	85.00	
9J1	726AY	LSP	20110825	0.10	141.00	20.00	
9J1	726AY	LSP	20110927	0.13	141.00	55.00	
9J1	726AY	LSP	20111018	0.25	141.00	66.00	
9J1	726AY	LSP	20111130	0.25	141.00	55.00	Q at arrival 0.28
9J1	726AY	LSP	20111221	0.35	141.00	74.00	
9J1	726AY	LSP	20120206	0.40	141.00	84.00	
9J1	726AY	LSP	20120313	0.45	141.00	93.00	
9J1	726AY	LSP	20120404	0.40	141.00		Q at arrival 0.23. 1 ft
9J1	726AY	LSP	20120423	0.40	141.00		
9J1	726AY	LSP	20120620	0.40	141.00		probe in meas tube.
9J1	726AY	LSP	20120822	0.35	141.00		probe in meas tube.
9J1	726AY	LSP	20121011	0.80	141.00		probe in meas tube.
9J1	726AY	LSP	20121128	0.45	141.00		
9J1	726AY	LSP	20130128	0.50	141.00		
9J1	726AY	LSP	20130325	0.45	141.00		
9J1	726AY	LSP	20130430	0.45	141.00		

9J1	726AY	LSP	20130605	0.45	141.00		Q was .48 cfs at arrival
9J1	726AY	LSP	20130717	0.50	141.00		
9J1	726AY	LSP	20130828	0.50	141.00		
9J1	726AY	LSP	20131003	0.50	141.00	111.00	
9J1	726AY	LSP	20131107	0.55	141.00	126.00	W.S. and casing pr. per
9J1	726AY	LSP	20131210	0.60	141.00	133.00	W.S. & casing psi per
9J1	726AY	LSP	20140312	0.63	141.00	136.90	W.S. and flow per

## LACFCD Seawater Barrier database: Historical Injection Rate Information - Well 9M

PROJ	FCD	AQUIF	Date	Q (CFS)	RP_EL	ELEV
9M1	726BB	LSP	19911030.00	0.52	158.30	14.20
9M1	726BB	LSP	19911127.00	0.52	158.30	21.00
9M1	726BB	LSP	19911227.00	0.52	158.30	33.30
9M1	726BB	LSP	19920127.00	0.46	158.30	28.60
9M1	726BB	LSP	19920227.00	0.46	158.30	31.30
9M1	726BB	LSP	19920408.00	0.45	158.30	32.60
9M1	726BB	LSP	19920429.00	0.45	158.30	33.00
9M1	726BB	LSP	19920603.00	0.45	158.30	41.10
9M1	726BB	LSP	19920701.00	0.47	158.30	27.50
9M1	726BB	LSP	19920805.00	0.45	158.30	43.80
9M1	726BB	LSP	19920902.00	0.45	158.30	44.00
9M1	726BB	LSP	19921002.00	0.65	158.30	42.90
9M1	726BB	LSP	19921028.00	0.66	158.30	43.80
9M1	726BB	LSP	19921203.00	0.66	158.30	40.50
9M1	726BB	LSP	19921217.00	0.67	158.30	44.30
9M1	726BB	LSP	19930128.00	0.85	158.30	55.50
9M1	726BB	LSP	19930224.00	0.00	158.30	-1.80
9M1	726BB	LSP	19930331.00	0.83	158.30	53.80
9M1	726BB	LSP	19930428.00	0.82	158.30	58.60
9M1	726BB	LSP	19930603.00	0.82	158.30	61.00
9M1	726BB	LSP	19930630.00	0.98	158.30	67.90
9M1	726BB	LSP	19930728.00	0.98	158.30	66.70
9M1	726BB	LSP	19930826.00	0.98	158.30	58.60
9M1	726BB	LSP	19931001.00	0.99	158.30	73.20
9M1	726BB	LSP	19931026.00	0.98	158.30	78.20
9M1	726BB	LSP	19931124.00	0.98	158.30	80.40
9M1	726BB	LSP	19931227.00	0.98	158.30	88.30
9M1	726BB	LSP	19940127.00	0.98	158.30	92.30
9M1	726BB	LSP	19940302.00	0.98	158.30	100.30
9M1	726BB	LSP	19940323.00	0.95	158.30	103.30
9M1	726BB	LSP	19940423.00	0.00	158.30	-1.70
9M1	726BB	LSP	19940523.00	0.00	158.30	-1.70
9M1	726BB	LSP	19940630.00	1.00	158.30	83.30
9M1	726BB	LSP	19940803.00	1.00	158.30	90.30
9M1	726BB	LSP	19940902.00	0.94	158.30	103.30
9M1	726BB	LSP	19940929.00	0.92	158.30	112.30
9M1	726BB	LSP	19941026.00	0.92	158.30	114.10
9M1	726BB	LSP	19941130.00	0.85	158.30	130.50
9M1	726BB	LSP	19941229.00	0.86	158.30	136.30
9M1	726BB	LSP	19950120.00	0.00	158.30	8.00
9M1	726BB	LSP	19950320.00	0.00	158.30	8.00
9M1	726BB	LSP	19950426.00	0.81	158.30	123.00
9M1	726BB	LSP	19950601.00	0.80	158.30	132.30
9M1	726BB	LSP	19950628.00	0.80	158.30	129.30
9M1	726BB	LSP	19950726.00	0.80	158.30	135.80

9M1	726BB	LSP	19950831.00	0.78	158.30	150.70
9M1	726BB	LSP	19950920.00	0.79	158.30	146.10
9M1	726BB	LSP	19951101.00	0.70	158.30	0.00
9M1	726BB	LSP	19951213.00	0.00	158.30	0.00
9M1	726BB	LSP	19951227.00	0.31	158.30	0.00
9M1	726BB	LSP	19960105.00	0.31	158.30	112.30
9M1	726BB	LSP	19960110.00	0.31	158.30	134.30
9M1	726BB	LSP	19960118.00	0.31	158.30	135.60
9M1	726BB	LSP	19960123.00	0.31	158.30	92.20
9M1	726BB	LSP	19960201.00	0.31	158.30	104.10
9M1	726BB	LSP	19960208.00	0.31	158.30	102.00
9M1	726BB	LSP	19960214.00	0.31	158.30	110.20
9M1	726BB	LSP	19960228.00	0.60	158.30	148.30
9M1	726BB	LSP	19960306.00	0.70	158.30	0.00
9M1	726BB	LSP	19960319.00	0.68	158.30	0.00
9M1	726BB	LSP	19960326.00	0.68	158.30	169.80
9M1	726BB	LSP	19960403.00	0.60	158.30	213.60
9M1	726BB	LSP	19960409.00	0.60	158.30	213.70
9M1	726BB	LSP	19960416.00	0.51	158.30	190.60
9M1	726BB	LSP	19960423.00	0.52	158.30	190.60
9M1	726BB	LSP	19960501.00	0.46	158.30	197.50
9M1	726BB	LSP	19960509.00	0.44	158.30	204.40
9M1	726BB	LSP	19960514.00	0.41	158.30	204.40
9M1	726BB	LSP	19960523.00	0.38	158.30	199.80
9M1	726BB	LSP	19960530.00	0.38	158.30	199.80
9M1	726BB	LSP	19960607.00	0.30	158.30	162.90
9M1	726BB	LSP	19960613.00	0.30	158.30	176.80
9M1	726BB	LSP	19960618.00	0.30	158.30	181.40
9M1	726BB	LSP	19960627.00	0.29	158.30	181.40
9M1	726BB	LSP	19960731.00	0.29	158.30	176.80
9M1	726BB	LSP	19960807.00	0.29	158.30	176.80
9M1	726BB	LSP	19960814.00	0.28	158.30	179.10
9M1	726BB	LSP	19960829.00	0.29	158.30	176.80
9M1	726BB	LSP	19960910.00	0.29	158.30	172.10
9M1	726BB	LSP	19960917.00	0.29	158.30	169.80
9M1	726BB	LSP	19960919.00	0.00	158.30	8.00
9M1	726BB	LSP	19960924.00	0.00	158.30	8.00
9M1	726BB	LSP	19960930.00	0.30	158.30	15.00
9M1	726BB	LSP	19961010.00	0.29	158.30	105.30
9M1	726BB	LSP	19961016.00	0.29	158.30	105.00
9M1	726BB	LSP	19961023.00	0.29	158.30	105.30
9M1	726BB	LSP	19961106.00	0.27	158.30	120.60
9M1	726BB	LSP	19961120.00	0.28	158.30	122.90
9M1	726BB	LSP	19961204.00	0.34	158.30	136.30
9M1	726BB	LSP	19961220.00	0.33	158.30	162.90
9M1	726BB	LSP	19970106.00	0.32	158.30	172.10
9M1	726BB	LSP	19970130.00	0.32	158.30	176.80

9M1	726BB	LSP	19970205.00	0.32	158.30	176.80
9M1	726BB	LSP	19970213.00	0.32	158.30	176.80
9M1	726BB	LSP	19970220.00	0.32	158.30	176.80
9M1	726BB	LSP	19970227.00	0.00	158.30	176.80
9M1	726BB	LSP	19970306.00	0.00	158.30	158.30
9M1	726BB	LSP	19970318.00	0.00	158.30	158.30
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9M1	726BB	LSP	20000725.00	0.55	158.30	48.10
9M1	726BB	LSP	20000811.00	0.55	158.30	67.80
9M1	726BB	LSP	20000830.00	0.55	158.30	77.50
9M1	726BB	LSP	20000918.00	0.56	158.30	82.30
9M1	726BB	LSP	20001006.00	0.55	158.30	82.30
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9M1	726BB	LSP	20001129.00	0.75	158.30	114.30
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9M1	726BB	LSP	20010705.00	0.49	158.30	174.45
9M1	726BB	LSP	20010725.00	0.50	158.30	172.15
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9M1	726BB	LSP	20010926.00	0.51	158.30	172.15
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9M1	726BB	LSP	20011031.00	0.43	158.30	190.61
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9M1	726BB	LSP	20011220.00	0.38	158.30	158.30
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9M1	726BB	LSP	20020425.00	0.00	158.30	126.00
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9M1	726BB	LSP	20020612.00	0.50	158.30	139.90
9M1	726BB	LSP	20020711.00	0.50	158.30	139.90
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9M1	726BB	LSP	20021005.00	0.50	158.30	137.60
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9M1	726BB	LSP	20021126.00	0.25	158.30	144.50
9M1	726BB	LSP	20021204.00	0.50	158.30	158.30
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9M1	726BB	LSP	20030123.00	0.51	158.30	130.70
9M1	726BB	LSP	20030210.00	0.45	158.30	130.70
9M1	726BB	LSP	20030220.00	0.44	158.30	130.70
9M1	726BB	LSP	20030318.00	0.50	158.30	130.70
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9M1	726BB	LSP	20030507.00	0.54	158.30	179.07
9M1	726BB	LSP	20030521.00	0.72	158.30	190.61
9M1	726BB	LSP	20030609.00	0.72	158.30	104.70
9M1	726BB	LSP	20030624.00	0.74	158.30	103.30
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9M1	726BB	LSP	20031211.00	0.82	158.30	130.90
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9M1	726BB	LSP	20040202.00	0.78	158.30	133.30
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9M1	726BB	LSP	20041222.00	0.16	158.30	83.30
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9M1	726BB	LSP	20090408.00	0.48	158.30	
9M1	726BB	LSP	20090416.00	0.48	158.30	
9M1	726BB	LSP	20090604.00	0.48	158.30	108.30
9M1	726BB	LSP	20090611.00	0.50	158.30	97.30
9M1	726BB	LSP	20090701.00	0.55	158.30	117.30
9M1	726BB	LSP	20090716.00	0.54	158.30	136.30
9M1	726BB	LSP	20090722.00	0.54	158.30	130.30
9M1	726BB	LSP	20090812.00	0.54	158.30	160.61
9M1	726BB	LSP	20090826.00	0.54	158.30	160.61
9M1	726BB	LSP	20090917.00	0.15	158.30	160.61
9M1	726BB	LSP	20090925.00	0.15	158.30	160.61
9M1	726BB	LSP	20091029.00	0.10	158.30	160.61
9M1	726BB	LSP	20091202.00	0.10	158.30	160.61
9M1	726BB	LSP	20091223.00	0.10	158.30	160.61
9M1	726BB	LSP	20100211.00	0.10	158.30	160.61
9M1	726BB	LSP	20100218.00	0.10	158.30	160.61
9M1	726BB	LSP	20100317.00	0.10	158.30	160.61
9M1	726BB	LSP	20100421.00	0.10	158.30	160.61
9M1	726BB	LSP	20100526.00	0.10	158.30	160.61
9M1	726BB	LSP	20100616.00	0.10	158.30	160.61
9M1	726BB	LSP	20100719.00	0.10	158.30	160.61
9M1	726BB	LSP	20100812.00	0.10	158.30	160.61
9M1	726BB	LSP	20100915.00	0.10	158.30	160.61
9M1	726BB	LSP	20101020.00	0.10	158.30	160.61
9M1	726BB	LSP	20101123.00	0.10	158.30	160.61
9M1	726BB	LSP	20110106.00	0.10	158.30	160.61
9M1	726BB	LSP	20110202.00	0.10	158.30	160.61
9M1	726BB	LSP	20110317.00	0.10	158.30	160.61
9M1	726BB	LSP	20110418.00	0.10	158.30	160.61
9M1	726BB	LSP	20110518.00	0.10	158.30	160.61
9M1	726BB	LSP	20110707.00	0.10	158.30	160.61
9M1	726BB	LSP	20110726.00	0.10	158.30	160.61
9M1	726BB	LSP	20110825.00	0.10	158.30	160.61
9M1	726BB	LSP	20110928.00	0.21	158.30	
9M1	726BB	LSP	20111018.00	0.05	158.30	160.61
9M1	726BB	LSP	20111130.00	0.05	158.30	160.61
9M1	726BB	LSP	20111221.00	0.05	158.30	160.61
9M1	726BB	LSP	20120206.00		158.30	160.61
9M1	726BB	LSP	20120313.00	0.05	158.30	160.61
9M1	726BB	LSP	20120404.00	0.05	158.30	160.61
9M1	726BB	LSP	20120424.00	0.05	158.30	160.61
9M1	726BB	LSP	20120620.00	0.05	158.30	
9M1	726BB	LSP	20120822.00	0.10	158.30	
9M1	726BB	LSP	20121011.00	0.25	158.30	

9M1	726BB	LSP	20121128.00	0.25	158.30	
9M1	726BB	LSP	20130128.00	0.25	158.30	
9M1	726BB	LSP	20130325.00	0.25	158.30	
9M1	726BB	LSP	20130430.00	0.20	158.30	
9M1	726BB	LSP	20130605.00	0.20	158.30	
9M1	726BB	LSP	20130717.00	0.30	158.30	
9M1	726BB	LSP	20130828.00	0.40	158.30	
9M1	726BB	LSP	20131003.00	0.45	158.30	89.30
9M1	726BB	LSP	20131107.00	0.55	158.30	98.30
9M1	726BB	LSP	20131210.00	0.60	158.30	107.10
9M1	726BB	LSP	20140312.00	0.65	158.30	96.30





















W.S. per telemetry
W.S. per telemetry.
W.S. per telemetry

## LACFCD Seawater Barrier database: Historical Injection Rate Information - Well 9P

PROJ	FCD	AQUIF	Date	Q (CFS)	RP_EL	ELEV	REMARKS
9P	726AZ	LSP	19760130	0.38	140.10	157.40	
9P	726AZ	LSP	19760227	0.19	140.10	187.40	
9P	726AZ	LSP	19760402	0.15	140.10	193.60	
9P	726AZ	LSP	19760427	0.10	140.10	188.80	
9P	726AZ	LSP	19760526	0.19	140.10	188.60	
9P	726AZ	LSP	19760701	0.10	140.10	203.60	
9P	726AZ	LSP	19760702	0.00	140.10	0.00	EXCESSIVE HEAD
9P	726AZ	LSP	19760729	0.00	140.10	1.20	
9P	726AZ	LSP	19760902	0.00	140.10	-2.80	
9P	726AZ	LSP	19761001	0.00	140.10	-3.50	
9P	726AZ	LSP	19761027	0.00	140.10	-3.50	
9P	726AZ	LSP	19761124	0.00	140.10	-3.30	
9P	726AZ	LSP	19761231	0.00	140.10	-2.90	
9P	726AZ	LSP	19770127	0.00	140.10	-2.90	
9P	726AZ	LSP	19770303	0.00	140.10	-2.90	
9P	726AZ	LSP	19770331	0.70	140.10	24.10	
9P	726AZ	LSP	19770429	0.72	140.10	29.40	
9P	726AZ	LSP	19770603	0.68	140.10	56.10	
9P	726AZ	LSP	19770630	0.85	140.10	79.00	
9P	726AZ	LSP	19770728	0.72	140.10	106.50	
9P	726AZ	LSP	19770901	0.67	140.10	121.40	
9P	726AZ	LSP	19770929	0.59	140.10	136.50	
9P	726AZ	LSP	19771027	0.58	140.10	142.40	
9P	726AZ	LSP	19771201	0.58	140.10	161.30	
9P	726AZ	LSP	19771229	0.51	140.10	174.70	
9P	726AZ	LSP	19780127	0.48	140.10	190.90	
9P	726AZ	LSP	19780224	0.40	140.10	204.60	
9P	726AZ	LSP	19780331	0.25	140.10	163.90	
9P	726AZ	LSP	19780428	0.20	140.10	200.10	
9P	726AZ	LSP	19780602	0.15	140.10	196.60	
9P	726AZ	LSP	19780630	0.15	140.10	190.90	
9P	726AZ	LSP	19780728	0.10	140.10	189.70	
9P	726AZ	LSP	19780901	0.10	140.10	167.80	
9P	726AZ	LSP	19780929	0.17	140.10	157.40	
9P	726AZ	LSP	19781103	0.20	140.10	147.00	
9P	726AZ	LSP	19781201	0.25	140.10	154.40	
9P	726AZ	LSP	19781228	0.22	140.10	163.20	
9P	726AZ	LSP	19790201	0.18	140.10	162.00	
9P	726AZ	LSP	19790216	0.00	140.10	0.00	OFF PRO LAYOFFS
9P	726AZ	LSP	19790301	0.19	140.10	86.90	
9P	726AZ	LSP	19790327	0.15	140.10	131.70	
9P	726AZ	LSP	19790427	0.18	140.10	133.50	
9P	726AZ	LSP	19790525	0.19	140.10	149.30	
9P	726AZ	LSP	19790529	0.00	140.10	0.00	TIE IN SEGMENT
9P	726AZ	LSP	19790702	0.00	140.10	-3.90	



9P	726AZ	LSP	19790720	0.18	140.10	135.50	
9P	726AZ	LSP	19790830	0.20	140.10	133.20	
9P	726AZ	LSP	19790927	0.10	140.10	124.30	
9P	726AZ	LSP	19791102	0.12	140.10	132.30	
9P	726AZ	LSP	19791109	0.00	140.10	0.00	REDEVELOPMENT
9P	726AZ	LSP	19791129	0.42	140.10	20.90	
9P	726AZ	LSP	19791228	0.42	140.10	57.00	
9P	726AZ	LSP	19800131	0.41	140.10	79.90	
9P	726AZ	LSP	19800227	0.40	140.10	88.40	
9P	726AZ	LSP	19800326	0.50	140.10	109.00	
9P	726AZ	LSP	19800501	0.43	140.10	131.20	
9P	726AZ	LSP	19800530	0.42	140.10	140.10	
9P	726AZ	LSP	19800626	0.39	140.10	154.00	
9P	726AZ	LSP	19800807	0.38	140.10	147.00	
9P	726AZ	LSP	19800904	0.40	140.10	151.60	
9P	726AZ	LSP	19801002	0.40	140.10	135.30	
9P	726AZ	LSP	19801030	0.36	140.10	149.30	
9P	726AZ	LSP	19801128	0.33	140.10	163.20	
9P	726AZ	LSP	19810102	0.28	140.10	184.00	
9P	726AZ	LSP	19810130	0.26	140.10	197.80	
9P	726AZ	LSP	19810226	0.15	140.10	163.00	
9P	726AZ	LSP	19810326	0.10	140.10	163.20	
9P	726AZ	LSP	19810430	0.10	140.10	163.20	
9P	726AZ	LSP	19810529	0.10	140.10	154.40	
9P	726AZ	LSP	19810702	0.10	140.10	151.60	
9P	726AZ	LSP	19810717	0.00	140.10	0.00	REPLACE VALVE
9P	726AZ	LSP	19810731	0.20	140.10	104.60	
9P	726AZ	LSP	19810827	0.21	140.10	120.80	
9P	726AZ	LSP	19811001	0.23	140.10	131.60	
9P	726AZ	LSP	19811029	0.23	140.10	142.40	
9P	726AZ	LSP	19811125	0.21	140.10	149.30	
9P	726AZ	LSP	19811223	0.19	140.10	156.30	
9P	726AZ	LSP	19820128	0.19	140.10	163.20	
9P	726AZ	LSP	19820224	0.10	140.10	175.10	
9P	726AZ	LSP	19820407	0.19	140.10	186.20	
9P	726AZ	LSP	19820504	0.19	140.10	186.20	
9P	726AZ	LSP	19820602	0.19	140.10	186.20	
9P	726AZ	LSP	19820630	0.15	140.10	181.60	
9P	726AZ	LSP	19820728	0.18	140.10	188.60	
9P	726AZ	LSP	19820909	0.15	140.10	177.00	
9P	726AZ	LSP	19820921	0.22	140.10	197.80	
9P	726AZ	LSP	19821102	0.20	140.10	181.60	
9P	726AZ	LSP	19821105	0.00	140.10	0.00	REDEVELOPMENT
9P	726AZ	LSP	19821201	0.20	140.10	22.60	
9P	726AZ	LSP	19830103	0.20	140.10	31.30	
9P	726AZ	LSP	19830128	0.20	140.10	31.80	
9P	726AZ	LSP	19830225	0.19	140.10	47.00	

9P	726AZ	LSP	19830330	0.48	140.10	70.50	
9P	726AZ	LSP	19830429	0.44	140.10	87.10	
9P	726AZ	LSP	19830526	0.60	140.10	120.90	
9P	726AZ	LSP	19830624	0.74	140.10	144.70	
9P	726AZ	LSP	19830722	0.75	140.10	158.60	
9P	726AZ	LSP	19830824	0.00	140.10	0.00	REDEVELOPMENT
9P	726AZ	LSP	19830902	0.00	140.10	0.00	REDEVELOPMENT
9P	726AZ	LSP	19830929	0.69	140.10	116.40	
9P	726AZ	LSP	19831028	0.69	140.10	132.70	
9P	726AZ	LSP	19831108	0.00	140.10	0.00	PR STA. SECURED
9P	726AZ	LSP	19831208	0.65	140.10	127.60	
9P	726AZ	LSP	19840106	0.70	140.10	158.60	
9P	726AZ	LSP	19840202	0.65	140.10	177.00	
9P	726AZ	LSP	19840302	0.61	140.10	186.30	
9P	726AZ	LSP	19840328	0.62	140.10	186.30	
9P	726AZ	LSP	19840425	0.59	140.10	190.90	
9P	726AZ	LSP	19840516	0.00	140.10	0.00	REDEVELOPMENT
9P	726AZ	LSP	19840523	0.00	140.10	0.00	REDEVELOPMENT
9P	726AZ	LSP	19840628	0.63	140.10	98.40	
9P	726AZ	LSP	19840724	0.66	140.10	102.00	
9P	726AZ	LSP	19840829	0.56	140.10	115.10	
9P	726AZ	LSP	19840926	0.54	140.10	122.80	
9P	726AZ	LSP	19841030	0.53	140.10	126.50	
9P	726AZ	LSP	19841129	0.60	140.10	147.00	
9P	726AZ	LSP	19841227	0.58	140.10	154.00	
9P	726AZ	LSP	19850130	0.55	140.10	163.20	
9P	726AZ	LSP	19850227	0.50	140.10	167.80	
9P	726AZ	LSP	19850326	0.00	140.10	0.00	REDEVELOPMENT
9P	726AZ	LSP	19850328	0.00	140.10	3.20	REDEVELOPMENT
9P	726AZ	LSP	19850424	0.48	140.10	136.80	
9P	726AZ	LSP	19850530	0.38	140.10	177.00	
9P	726AZ	LSP	19850626	0.36	140.10	195.50	
9P	726AZ	LSP	19850730	0.32	140.10	204.70	
9P	726AZ	LSP	19850828	0.31	140.10	207.00	
9P	726AZ	LSP	19850910	0.00	140.10	0.00	INST HYDROELE
9P	726AZ	LSP	19851001	0.00	140.10	-4.90	
9P	726AZ	LSP	19851030	0.00	140.10	-4.90	
9P	726AZ	LSP	19851204	0.25	140.10	163.20	
9P	726AZ	LSP	19860102	0.23	140.10	163.20	
9P	726AZ	LSP	19860129	0.20	140.10	172.40	
9P	726AZ	LSP	19860227	0.21	140.10	190.90	
9P	726AZ	LSP	19860318	0.00	140.10	0.00	REDEVELOPMENT
9P	726AZ	LSP	19860402	0.30	140.10	126.30	
9P	726AZ	LSP	19860501	0.28	140.10	154.00	
9P	726AZ	LSP	19860529	0.25	140.10	165.50	
9P	726AZ	LSP	19860703	0.25	140.10	172.40	
9P	726AZ	LSP	19860731	0.23	140.10	179.30	

9P	726AZ	LSP	19860827	0.20	140.10	179.30	
9P	726AZ	LSP	19861001	0.22	140.10	172.40	
9P	726AZ	LSP	19861030	0.25	140.10	174.70	
9P	726AZ	LSP	19861125	0.22	140.10	174.70	
9P	726AZ	LSP	19861231	0.21	140.10	177.00	
9P	726AZ	LSP	19870115	0.00	140.10	0.00	REDEVELOPMENT
9P	726AZ	LSP	19870130	0.00	140.10	1.60	
9P	726AZ	LSP	19870225	0.22	140.10	121.20	
9P	726AZ	LSP	19870401	0.26	140.10	144.70	
9P	726AZ	LSP	19870429	0.25	140.10	149.30	
9P	726AZ	LSP	19870527	0.22	140.10	151.60	
9P	726AZ	LSP	19870701	0.22	140.10	154.00	
9P	726AZ	LSP	19870730	0.22	140.10	154.00	
9P	726AZ	LSP	19870827	0.21	140.10	156.30	
9P	726AZ	LSP	19870930	0.20	140.10	156.30	
9P	726AZ	LSP	19871028	0.21	140.10	151.60	
9P	726AZ	LSP	19871125	0.21	140.10	151.60	
9P	726AZ	LSP	19871229	0.20	140.10	165.50	
9P	726AZ	LSP	19880127	0.19	140.10	170.10	
9P	726AZ	LSP	19880223	0.14	140.10	170.10	
9P	726AZ	LSP	19880330	0.19	140.10	179.30	
9P	726AZ	LSP	19880426	0.20	140.10	177.00	
9P	726AZ	LSP	19880524	0.20	140.10	179.30	
9P	726AZ	LSP	19880629	0.20	140.10	179.30	
9P	726AZ	LSP	19880726	0.20	140.10	179.30	
9P	726AZ	LSP	19880830	0.20	140.10	177.00	
9P	726AZ	LSP	19880929	0.20	140.10	167.70	
9P	726AZ	LSP	19881025	0.20	140.10	167.80	
9P	726AZ	LSP	19881130	0.20	140.10	177.00	
9P	726AZ	LSP	19881229	0.19	140.10	181.60	
9P	726AZ	LSP	19890125	0.19	140.10	181.60	
9P	726AZ	LSP	19890223	0.18	140.10	186.20	
9P	726AZ	LSP	19890329	0.13	140.10	186.20	
9P	726AZ	LSP	19890504	0.12	140.10	186.20	
9P	726AZ	LSP	19890601	0.11	140.10	188.60	
9P	726AZ	LSP	19890628	0.11	140.10	190.90	
9P	726AZ	LSP	19890802	0.20	140.10	181.60	
9P	726AZ	LSP	19890830	0.19	140.10	172.40	
9P	726AZ	LSP	19890928	0.20	140.10	170.10	
9P	726AZ	LSP	19891102	0.20	140.10	0.00	MEAS. TUBE BROKE
9P	726AZ	LSP	19891129	0.20	140.10	140.10	
9P	726AZ	LSP	19900103	0.18	140.10	158.50	
9P	726AZ	LSP	19900131	0.14	140.10	161.10	
9P	726AZ	LSP	19900228	0.12	140.10	170.10	
9P	726AZ	LSP	19900405	0.12	140.10	175.10	
9P	726AZ	LSP	19900503	0.15	140.10	172.40	
9P	726AZ	LSP	19900601	0.15	140.10	158.50	

9P	726AZ	LSP	19900705	0.10	140.10	167.80	
9P	726AZ	LSP	19900801	0.10	140.10	170.10	
9P	726AZ	LSP	19900830	0.12	140.10	167.80	
9P	726AZ	LSP	19901003	0.10	140.10	158.60	
9P	726AZ	LSP	19901031	0.10	140.10	163.20	
9P	726AZ	LSP	19901205	0.10	140.10	170.10	
9P	726AZ	LSP	19910103	0.10	140.10	172.40	
9P	726AZ	LSP	19910130	0.10	140.10	181.60	
9P	726AZ	LSP	19910227	0.10	140.10	181.60	
9P	726AZ	LSP	19910403	0.15	140.10	107.90	
9P	726AZ	LSP	19910501	0.11	140.10	91.80	
9P	726AZ	LSP	19910612	0.00	140.10	1.10	*
9P	726AZ	LSP	19910714	0.00	140.10	-2.80	MEASURED 910717
9P	726AZ	LSP	19910807	0.00	140.10	-3.90	OFF FOR CONSTR.
9P	726AZ	LSP	19910906	0.13	140.10	97.80	
9P	726AZ	LSP	19911003	0.11	140.10	95.60	
9P	726AZ	LSP	19911031	0.14	140.10	97.10	
9P	726AZ	LSP	19911127	0.15	140.10	104.30	
9P	726AZ	LSP	19911227	0.14	140.10	112.10	
9P	726AZ	LSP	19920127	0.10	140.10	123.20	
9P	726AZ	LSP	19920227	0.12	140.10	128.80	
9P	726AZ	LSP	19920408	0.18	140.10	15.10	
9P	726AZ	LSP	19920429	0.10	140.10	123.00	
9P	726AZ	LSP	19920604	0.10	140.10	126.00	
9P	726AZ	LSP	19920701	0.10	140.10	32.40	
9P	726AZ	LSP	19920805	0.10	140.10	32.10	
9P	726AZ	LSP	19920902	0.10	140.10	33.80	
9P	726AZ	LSP	19921002	0.10	140.10	35.70	
9P	726AZ	LSP	19921028	0.10	140.10	33.70	
9P	726AZ	LSP	19921203	0.10	140.10	37.60	
9P	726AZ	LSP	19921217	0.10	140.10	38.50	
9P	726AZ	LSP	19930128	0.10	140.10	42.40	
9P	726AZ	LSP	19930224	0.00	140.10	-0.70	
9P	726AZ	LSP	19930331	0.14	140.10	120.50	
9P	726AZ	LSP	19930428	0.13	140.10	122.50	
9P	726AZ	LSP	19930603	0.10	140.10	125.50	
9P	726AZ	LSP	19930630	0.10	140.10	123.10	
9P	726AZ	LSP	19930728	0.11	140.10	118.90	
9P	726AZ	LSP	19930826	0.15	140.10	121.30	
9P	726AZ	LSP	19931001	0.13	140.10	121.10	
9P	726AZ	LSP	19931027	0.15	140.10	119.10	
9P	726AZ	LSP	19931124	0.20	140.10	125.10	
9P	726AZ	LSP	19931227	0.19	140.10	138.10	
9P	726AZ	LSP	19940127	0.18	140.10	140.10	
9P	726AZ	LSP	19940302	0.19	140.10	142.40	
9P	726AZ	LSP	19940323	0.19	140.10	140.10	
9P	726AZ	LSP	19940423	0.00	140.10	-0.30	OFF

9P	726AZ	LSP	19940523	0.00	140.10	-0.30	OFF
9P	726AZ	LSP	19940706	0.22	140.10	151.60	
9P	726AZ	LSP	19940803	0.24	140.10	149.30	
9P	726AZ	LSP	19940902	0.22	140.10	147.30	
9P	726AZ	LSP	19940929	0.22	140.10	151.60	
9P	726AZ	LSP	19941026	0.20	140.10	151.60	
9P	726AZ	LSP	19941130	0.20	140.10	153.10	
9P	726AZ	LSP	19941229	0.20	140.10	172.40	
9P	726AZ	LSP	19950120	0.00	140.10	8.00	
9P	726AZ	LSP	19950320	0.00	140.10	8.00	
9P	726AZ	LSP	19950426	0.10	140.10	151.60	
9P	726AZ	LSP	19950601	0.10	140.10	154.00	
9P	726AZ	LSP	19950628	0.20	140.10	130.70	
9P	726AZ	LSP	19950726	0.20	140.10	153.90	
9P	726AZ	LSP	19950831	0.20	140.10	156.20	
9P	726AZ	LSP	19950920	0.20	140.10	153.80	
9P	726AZ	LSP	19951101	0.19	140.10	163.10	
9P	726AZ	LSP	19951213	0.00	140.10	0.00	NO WS EL
9P	726AZ	LSP	19951227	0.00	140.10	55.10	NO Q DATA
9P	726AZ	LSP	19960105	0.11	140.10	135.10	
9P	726AZ	LSP	19960110	0.12	140.10	144.70	
9P	726AZ	LSP	19960118	0.10	140.10	151.60	
9P	726AZ	LSP	19960123	0.11	140.10	144.70	
9P	726AZ	LSP	19960201	0.10	140.10	151.60	
9P	726AZ	LSP	19960208	0.10	140.10	158.50	
9P	726AZ	LSP	19960214	0.10	140.10	183.90	
9P	726AZ	LSP	19960228	0.10	140.10	163.10	
9P	726AZ	LSP	19960306	0.05	140.10	165.90	
9P	726AZ	LSP	19960319	0.15	140.10	186.20	
9P	726AZ	LSP	19960326	0.15	140.10	186.20	
9P	726AZ	LSP	19960403	0.15	140.10	190.80	
9P	726AZ	LSP	19960409	0.12	140.10	193.10	
9P	726AZ	LSP	19960416	0.05	140.10	174.70	PP=24, Q=.24
9P	726AZ	LSP	19960423	0.10	140.10	167.70	
9P	726AZ	LSP	19960501	0.10	140.10	170.10	
9P	726AZ	LSP	19960509	0.11	140.10	167.70	
9P	726AZ	LSP	19960514	0.10	140.10	167.70	
9P	726AZ	LSP	19960523	0.05	140.10	166.30	
9P	726AZ	LSP	19960530	0.05	140.10	166.30	
9P	726AZ	LSP	19960607	0.07	140.10	170.10	
9P	726AZ	LSP	19960613	0.05	140.10	170.10	
9P	726AZ	LSP	19960618	0.05	140.10	167.80	
9P	726AZ	LSP	19960627	0.05	140.10	167.80	
9P	726AZ	LSP	19960731	0.10	140.10	165.50	
9P	726AZ	LSP	19960807	0.10	140.10	165.50	
9P	726AZ	LSP	19960814	0.10	140.10	170.10	
9P	726AZ	LSP	19960829	0.10	140.10	170.10	

9P	726AZ	LSP	19960910	0.10	140.10	167.80	
9P	726AZ	LSP	19960917	0.10	140.10	142.40	
9P	726AZ	LSP	19960919	0.00	140.10	8.00	
9P	726AZ	LSP	19960924	0.00	140.10	8.00	
9P	726AZ	LSP	19960927	0.10	140.10	15.00	Well On
9P	726AZ	LSP	19961010	0.12	140.10	119.10	
9P	726AZ	LSP	19961016	0.10	140.10	122.10	
9P	726AZ	LSP	19961023	0.10	140.10	127.60	
9P	726AZ	LSP	19961106	0.08	140.10	128.60	
9P	726AZ	LSP	19961120	0.10	140.10	130.20	
9P	726AZ	LSP	19961204	0.12	140.10	133.10	
9P	726AZ	LSP	19961220	0.12	140.10	142.40	
9P	726AZ	LSP	19970106	0.14	140.10	142.40	
9P	726AZ	LSP	19970130	0.11	140.10	149.30	
9P	726AZ	LSP	19970205	0.15	140.10	149.30	
9P	726AZ	LSP	19970213	0.15	140.10	149.30	
9P	726AZ	LSP	19970220	0.15	140.10	151.60	
9P	726AZ	LSP	19970227	0.15	140.10	149.30	
9P	726AZ	LSP	19970306	0.15	140.10	149.30	
9P	726AZ	LSP	19970318	0.15	140.10	149.30	
9P	726AZ	LSP	19970326	0.00	140.10	149.30	Q=.15/0.0cfs-Red
9P	726AZ	LSP	19970417	0.15	140.10	149.30	
9P	726AZ	LSP	19970423	0.15	140.10	156.30	
9P	726AZ	LSP	19970429	0.15	140.10	156.30	
9P	726AZ	LSP	19970515	0.15	140.10	147.00	
9P	726AZ	LSP	19970604	0.21	140.10	91.10	
9P	726AZ	LSP	19970610	0.15	140.10	90.30	
9P	726AZ	LSP	19970618	0.15	140.10	97.10	
9P	726AZ	LSP	19970626	0.20	140.10	95.10	
9P	726AZ	LSP	19970707	0.18	140.10	93.10	
9P	726AZ	LSP	19970717	0.18	140.10	92.60	
9P	726AZ	LSP	19970722	0.18	140.10	97.10	
9P	726AZ	LSP	19970813	0.18	140.10	106.10	
9P	726AZ	LSP	19970819	0.22	140.10	106.60	
9P	726AZ	LSP	19970904	0.20	140.10	103.10	
9P	726AZ	LSP	19970912	0.19	140.10	96.10	
9P	726AZ	LSP	19970922	0.20	140.10	99.10	
9P	726AZ	LSP	19971002	0.21	140.10	105.10	
9P	726AZ	LSP	19971009	0.21	140.10	113.10	
9P	726AZ	LSP	19971022	0.20	140.10	137.10	
9P	726AZ	LSP	19971028	0.20	140.10	137.10	
9P	726AZ	LSP	19971105	0.20	140.10	142.40	
9P	726AZ	LSP	19971120	0.20	140.10	149.30	
9P	726AZ	LSP	19971203	0.17	140.10	153.90	
9P	726AZ	LSP	19971210	0.17	140.10	151.60	
9P	726AZ	LSP	19971231	0.14	140.10	144.70	
9P	726AZ	LSP	19980108	0.15	140.10	156.30	

9P	726AZ	LSP	19980116	0.12	140.10	156.30
9P	726AZ	LSP	19980121	0.09	140.10	158.60
9P	726AZ	LSP	19980128	0.15	140.10	160.90
9P	726AZ	LSP	19980213	0.15	140.10	158.60
9P	726AZ	LSP	19980226	0.14	140.10	163.20
9P	726AZ	LSP	19980304	0.19	140.10	96.10
9P	726AZ	LSP	19980319	0.14	140.10	165.50
9P	726AZ	LSP	19980331	0.15	140.10	167.80
9P	726AZ	LSP	19980407	0.15	140.10	165.50
9P	726AZ	LSP	19980414	0.15	140.10	167.80
9P	726AZ	LSP	19980430	0.14	140.10	167.79
9P	726AZ	LSP	19980505	0.12	140.10	167.79
9P	726AZ	LSP	19980520	0.12	140.10	165.48
9P	726AZ	LSP	19980526	0.12	140.10	167.79
9P	726AZ	LSP	19980608	0.11	140.10	167.79
9P	726AZ	LSP	19980615	0.14	140.10	167.79
9P	726AZ	LSP	19980622	0.12	140.10	174.72
9P	726AZ	LSP	19980624	0.12	140.10	174.72
9P	726AZ	LSP	19980701	0.12	140.10	163.18
9P	726AZ	LSP	19980706	0.10	140.10	153.95
9P	726AZ	LSP	19980723	0.12	140.10	163.18
9P	726AZ	LSP	19980730	0.12	140.10	167.79
9P	726AZ	LSP	19980805	0.13	140.10	165.48
9P	726AZ	LSP	19980817	0.12	140.10	163.18
9P	726AZ	LSP	19980915	0.12	140.10	158.56
9P	726AZ	LSP	19980928	0.14	140.10	151.64
9P	726AZ	LSP	19981005	0.12	140.10	151.64
9P	726AZ	LSP	19981009	0.13	140.10	153.95
9P	726AZ	LSP	19981015	0.14	140.10	158.56
9P	726AZ	LSP	19981022	0.12	140.10	163.18
9P	726AZ	LSP	19981029	0.12	140.10	163.18
9P	726AZ	LSP	19981119	0.12	140.10	163.18
9P	726AZ	LSP	19981125	0.14	140.10	165.48
9P	726AZ	LSP	19981203	0.12	140.10	165.48
9P	726AZ	LSP	19981210	0.12	140.10	163.18
9P	726AZ	LSP	19981217	0.12	140.10	163.18
9P	726AZ	LSP	19981224	0.14	140.10	158.56
9P	726AZ	LSP	19981229	0.12	140.10	158.56
9P	726AZ	LSP	19990104	0.10	140.10	158.56
9P	726AZ	LSP	19990111	0.10	140.10	158.56
9P	726AZ	LSP	19990125	0.10	140.10	158.56
9P	726AZ	LSP	19990222	0.12	140.10	158.56
9P	726AZ	LSP	19990308	0.12	140.10	158.56
9P	726AZ	LSP	19990316	0.09	140.10	158.56
9P	726AZ	LSP	19990329	0.16	140.10	147.02
9P	726AZ	LSP	19990412	0.10	140.10	144.72
9P	726AZ	LSP	19990504	0.17	140.10	138.10

9P	726AZ	LSP	19990607	0.20	140.10	135.10	
9P	726AZ	LSP	19990614	0.14	140.10	135.60	
9P	726AZ	LSP	19990722	0.20	140.10	138.90	
9P	726AZ	LSP	19990810	0.18	140.10	141.90	
9P	726AZ	LSP	19990817	0.14	140.10	147.02	
9P	726AZ	LSP	19990823	0.14	140.10	167.79	
9P	726AZ	LSP	19990830	0.18	140.10	167.79	
9P	726AZ	LSP	19990908	0.14	140.10	167.79	
9P	726AZ	LSP	19990913	0.14	140.10	167.79	
9P	726AZ	LSP	19991021	0.00	140.10	7.10	So. Ca line H2O leak
9P	726AZ	LSP	19991025	0.15	140.10	7.10	
9P	726AZ	LSP	19991104	0.16	140.10	128.10	
9P	726AZ	LSP	19991122	0.14	140.10	120.10	
9P	726AZ	LSP	19991206	0.11	140.10	133.10	
9P	726AZ	LSP	19991213	0.15	140.10	134.10	
9P	726AZ	LSP	19991220	0.11	140.10	130.10	
9P	726AZ	LSP	19991227	0.15	140.10	130.10	
9P	726AZ	LSP	20000125	0.13	140.10	140.10	
9P	726AZ	LSP	20000203	0.22	140.10	167.79	
9P	726AZ	LSP	20000301	0.26	140.10	163.18	
9P	726AZ	LSP	20000308	0.26	140.10	163.18	
9P	726AZ	LSP	20000424	0.10	140.10	3.10	
9P	726AZ	LSP	20000508	0.09	140.10	2.80	
9P	726AZ	LSP	20000530	0.20	140.10	2.70	Raised Q fr .09 to
9P	726AZ	LSP	20000612	0.21	140.10	109.40	Raised Q fr .09 to
9P	726AZ	LSP	20000629	0.20	140.10	105.30	Raised Q fr .09 to
9P	726AZ	LSP	20000725	0.20	140.10	115.60	Q=0.20/0.25
9P	726AZ	LSP	20000811	0.24	140.10	123.30	Q=0.20/0.25
9P	726AZ	LSP	20000830	0.22	140.10	125.10	Q=0.20/0.25
9P	726AZ	LSP	20000918	0.22	140.10	126.10	Q=0.20/0.25
9P	726AZ	LSP	20001006	0.23	140.10	128.90	Q=0.20/0.25
9P	726AZ	LSP	20001025	0.21	140.10	136.10	Q=0.20/0.25
9P	726AZ	LSP	20001108	0.22	140.10	144.72	Q=0.20/0.25
9P	726AZ	LSP	20001211	0.20	140.10	158.56	Q=0.20/0.25
9P	726AZ	LSP	20001214	0.10	140.10	156.25	
9P	726AZ	LSP	20010117	0.20	140.10	163.18	
9P	726AZ	LSP	20010125	0.17	140.10	163.18	
9P	726AZ	LSP	20010215	0.22	140.10	142.41	
9P	726AZ	LSP	20010308	0.21	140.10	142.41	
9P	726AZ	LSP	20010314	0.18	140.10	147.02	
9P	726AZ	LSP	20010321	0.17	140.10	147.02	
9P	726AZ	LSP	20010404	0.18	140.10	151.64	
9P	726AZ	LSP	20010411	0.16	140.10	151.64	
9P	726AZ	LSP	20010419	0.08	140.10	151.64	
9P	726AZ	LSP	20010503	0.07	140.10	149.33	
9P	726AZ	LSP	20010509	0.18	140.10	151.64	
9P	726AZ	LSP	20010518	0.17	140.10	151.64	0



9P	726AZ	LSP	20010531	0.17	140.10	153.95	
9P	726AZ	LSP	20010606	0.18	140.10	153.95	
9P	726AZ	LSP	20010613	0.17	140.10	151.64	
9P	726AZ	LSP	20010705	0.19	140.10	153.95	
9P	726AZ	LSP	20010725	0.20	140.10	153.95	
9P	726AZ	LSP	20010810	0.17	140.10	149.33	
9P	726AZ	LSP	20010926	0.15	140.10	160.87	
9P	726AZ	LSP	20011011	0.15	140.10	160.80	
9P	726AZ	LSP	20011023	0.12	140.10	167.79	0
9P	726AZ	LSP	20011031	0.12	140.10	167.79	0
9P	726AZ	LSP	20011107	0.12	140.10	170.10	
9P	726AZ	LSP	20011204	0.14	140.10	181.64	
9P	726AZ	LSP	20011210	0.14	140.10	181.64	
9P	726AZ	LSP	20011220	0.14	140.10	181.64	
9P	726AZ	LSP	20020115	0.16	140.10	174.72	
9P	726AZ	LSP	20020204	0.15	140.10	170.10	
9P	726AZ	LSP	20020221	0.16	140.10	107.80	
9P	726AZ	LSP	20020227	0.16	140.10	114.80	
9P	726AZ	LSP	20020307	0.16	140.10	110.10	
9P	726AZ	LSP	20020314	0.16	140.10	114.80	
9P	726AZ	LSP	20020404	0.14	140.10	107.80	
9P	726AZ	LSP	20020425	0.14	140.10	107.80	
9P	726AZ	LSP	20020508	0.14	140.10	107.80	
9P	726AZ	LSP	20020522	0.10	140.10	112.50	
9P	726AZ	LSP	20020606	0.10	140.10	112.50	
9P	726AZ	LSP	20020612	0.15	140.10	112.50	
9P	726AZ	LSP	20020711	0.16	140.10	121.70	
9P	726AZ	LSP	20020726	0.16	140.10	121.30	
9P	726AZ	LSP	20020826	0.17	140.10	0.00	
9P	726AZ	LSP	20020905	0.12	140.10	144.70	
9P	726AZ	LSP	20020920	0.12	140.10	133.20	
9P	726AZ	LSP	20021004	0.10	140.10	124.00	
9P	726AZ	LSP	20021018	0.12	140.10	124.00	
9P	726AZ	LSP	20021104	0.12	140.10	124.00	
9P	726AZ	LSP	20021126	0.40	140.10	124.00	
9P	726AZ	LSP	20021207	0.10	140.10	119.40	
9P	726AZ	LSP	20030108	0.10	140.10	112.50	
9P	726AZ	LSP	20030123	0.10	140.10	112.50	
9P	726AZ	LSP	20030210	0.22	140.10	112.50	
9P	726AZ	LSP	20030220	0.10	140.10	112.50	
9P	726AZ	LSP	20030318	0.09	140.10	135.50	0
9P	726AZ	LSP	20030325	0.10	140.10	112.50	0
9P	726AZ	LSP	20030507	0.10	140.10	144.72	
9P	726AZ	LSP	20030521	0.10	140.10	144.72	
9P	726AZ	LSP	20030609	0.10	140.10	144.72	
9P	726AZ	LSP	20030624	0.12	140.10	144.72	
9P	726AZ	LSP	20030710	0.15	140.10	135.10	

9P	726AZ	LSP	20030904	0.16	140.10	132.41	0
9P	726AZ	LSP	20031010	0.12	140.10	121.10	
9P	726AZ	LSP	20031106	0.14	140.10	119.10	
9P	726AZ	LSP	20031211	0.15	140.10	135.10	
9P	726AZ	LSP	20031229	0.17	140.10	112.80	
9P	726AZ	LSP	20040114	0.14	140.10	123.10	
9P	726AZ	LSP	20040203	0.00	140.10	100.10	DRILLERS ON
9P	726AZ	LSP	20040211	0.00	140.10	100.10	DRILLERS ON
9P	726AZ	LSP	20040305	0.00	140.10	93.10	DRILLERS ON
9P	726AZ	LSP	20040401	0.00	140.10	92.90	DRILLERS ON
9P	726AZ	LSP	20040414	0.00	140.10	-7.90	DRILLERS ON
9P	726AZ	LSP	20040513	0.00	140.10	-7.80	DRILLERS ON
9P	726AZ	LSP	20040603	0.00	140.10	92.60	DRILLERS ON
9P	726AZ	LSP	20040701	0.00	140.10	91.10	DRILLERS ON
9P	726AZ	LSP	20040708	0.00	140.10	91.20	DRILLERS ON
9P	726AZ	LSP	20040715	0.00	140.10	91.20	DRILLERS ON
9P	726AZ	LSP	20040812	0.00	140.10	-5.90	DRILLERS ON
9P	726AZ	LSP	20040824	0.00	140.10	4.10	DRILLERS ON
9P	726AZ	LSP	20040902	0.00	140.10	6.10	DRILLERS ON
9P	726AZ	LSP	20040929	0.00	140.10	3.10	DRILLERS ON
9P	726AZ	LSP	20041006	0.00	140.10	4.30	DRILLERS ON
9P	726AZ	LSP	20041104	0.00	140.10	67.10	DRILLERS ON
9P	726AZ	LSP	20041222	0.00	140.10	68.10	DRILLERS ON
9P	726AZ	LSP	20050414	0.00	140.10	68.10	DRILLERS ON
9P	726AZ	LSP	20050421	0.00	140.10	68.10	NO RD/LAST RD
9P	726AZ	LSP	20050504	0.00	140.10	67.90	NO RD/LAST RD
9P	726AZ	LSP	20050526	0.00	140.10	68.10	NO RD/LAST RD
9P	726AZ	LSP	20050609	0.00	140.10	67.10	NO RD/LAST RD
9P	726AZ	LSP	20050616	0.00	140.10	2.10	NO RD/LAST RD
9P	726AZ	LSP	20050627	0.00	140.10	2.10	NO RD/LAST RD
9P	726AZ	LSP	20050728	0.00	140.10	2.90	NO RD/LAST RD
9P	726AZ	LSP	20050804	0.00	140.10	3.10	NO RD/LAST RD
9P	726AZ	LSP	20050817	0.24	140.10	8.10	
9P	726AZ	LSP	20050824	0.24	140.10	8.10	
9P	726AZ	LSP	20050906	0.24	140.10	8.10	
9P	726AZ	LSP	20050919	0.24	140.10	118.10	
9P	726AZ	LSP	20051031	0.24	140.10	4.10	
9P	726AZ	LSP	20051116	0.24	140.10	103.10	
9P	726AZ	LSP	20051201	0.24	140.10	102.10	
9P	726AZ	LSP	20060106	0.24	140.10	102.10	
9P	726AZ	LSP	20060118	0.24	140.10	104.10	
9P	726AZ	LSP	20060302	0.20	140.10	105.10	
9P	726AZ	LSP	20060425	0.20	140.10	105.10	
9P	726AZ	LSP	20060508	0.20	140.10	125.10	
9P	726AZ	LSP	20060802	0.20	140.10	86.10	
9P	726AZ	LSP	20060814	0.24	140.10	86.10	
9P	726AZ	LSP	20060907	0.28	140.10	96.10	

9P	726AZ	LSP	20061012	0.26	140.10	89.10
9P	726AZ	LSP	20061019	0.26	140.10	89.10
9P	726AZ	LSP	20061206	0.20	140.10	94.10
9P	726AZ	LSP	20061226	0.20	140.10	94.10
9P	726AZ	LSP	20070104	0.20	140.10	94.10
9P	726AZ	LSP	20070110	0.20	140.10	94.10
9P	726AZ	LSP	20070131	0.20	140.10	94.10
9P	726AZ	LSP	20070208	0.20	140.10	94.10
9P	726AZ	LSP	20070215	0.20	140.10	94.10
9P	726AZ	LSP	20070228	0.20	140.10	94.10
9P	726AZ	LSP	20070314	0.20	140.10	100.10
9P	726AZ	LSP	20070319	0.20	140.10	115.10
9P	726AZ	LSP	20070502	0.20	140.10	115.10
9P	726AZ	LSP	20070511	0.20	140.10	
9P	726AZ	LSP	20070516	0.20	140.10	
9P	726AZ	LSP	20070606	0.18	140.10	
9P	726AZ	LSP	20070613	0.18	140.10	
9P	726AZ	LSP	20070627	0.18	140.10	
9P	726AZ	LSP	20070706	0.18	140.10	147.00
9P	726AZ	LSP	20070711	0.18	140.10	147.00
9P	726AZ	LSP	20070726	0.18	140.10	147.00
9P	726AZ	LSP	20070801	0.18	140.10	147.00
9P	726AZ	LSP	20070816	0.18	140.10	147.00
9P	726AZ	LSP	20070822	0.18	140.10	147.00
9P	726AZ	LSP	20070913	0.18	140.10	147.00
9P	726AZ	LSP	20070919	0.18	140.10	147.00
9P	726AZ	LSP	20070926	0.16	140.10	149.30
9P	726AZ	LSP	20071015	0.16	140.10	149.30
9P	726AZ	LSP	20071018	0.16	140.10	149.30
9P	726AZ	LSP	20071022	0.16	140.10	149.30
9P	726AZ	LSP	20071031	0.16	140.10	149.30
9P	726AZ	LSP	20071105	0.16	140.10	149.30
9P	726AZ	LSP	20071113	0.18	140.10	149.30
9P	726AZ	LSP	20071203	0.18	140.10	149.30
9P	726AZ	LSP	20071206	0.18	140.10	149.30
9P	726AZ	LSP	20071212	0.18	140.10	149.30
9P	726AZ	LSP	20071221	0.18	140.10	149.30
9P	726AZ	LSP	20080108	0.18	140.10	149.30
9P	726AZ	LSP	20080116	0.18	140.10	149.30
9P	726AZ	LSP	20080123	0.18	140.10	151.60
9P	726AZ	LSP	20080131	0.18	140.10	151.60
9P	726AZ	LSP	20080206	0.18	140.10	151.60
9P	726AZ	LSP	20080213	0.18	140.10	151.60
9P	726AZ	LSP	20080221	0.18	140.10	151.60
9P	726AZ	LSP	20080227	0.16	140.10	158.56
9P	726AZ	LSP	20080312	0.16	140.10	153.90
9P	726AZ	LSP	20080402	0.16	140.10	153.90

9P	726AZ	LSP	20080408	0.16	140.10	153.90	
9P	726AZ	LSP	20080416	0.16	140.10	153.90	
9P	726AZ	LSP	20080430	0.18	140.10	177.00	
9P	726AZ	LSP	20080514	0.18	140.10	172.40	
9P	726AZ	LSP	20080521	0.18	140.10	172.40	
9P	726AZ	LSP	20080630	0.10	140.10	142.00	
9P	726AZ	LSP	20080714	0.10	140.10	142.00	
9P	726AZ	LSP	20080717	0.10	140.10	142.40	
9P	726AZ	LSP	20080723	0.12	140.10	142.40	
9P	726AZ	LSP	20080812	0.05	140.10	142.40	
9P	726AZ	LSP	20081103	0.05	140.10	142.40	
9P	726AZ	LSP	20081210	0.05	140.10	110.10	
9P	726AZ	LSP	20081219	0.05	140.10	110.10	
9P	726AZ	LSP	20090106	0.05	140.10	110.10	
9P	726AZ	LSP	20090114	0.05	140.10	110.10	
9P	726AZ	LSP	20090130	0.12	140.10	110.10	
9P	726AZ	LSP	20090203	0.15	140.10	90.10	
9P	726AZ	LSP	20090212	0.12	140.10	100.10	
9P	726AZ	LSP	20090226	0.10	140.10	110.10	
9P	726AZ	LSP	20090312	0.10	140.10	127.10	
9P	726AZ	LSP	20090318	0.10	140.10	124.10	
9P	726AZ	LSP	20090325	0.10	140.10	122.10	
9P	726AZ	LSP	20090401	0.10	140.10	125.10	
9P	726AZ	LSP	20090408	0.10	140.10	121.10	
9P	726AZ	LSP	20090416	0.10	140.10	121.10	
9P	726AZ	LSP	20090604	0.10	140.10	92.10	
9P	726AZ	LSP	20090611	0.10	140.10	98.10	
9P	726AZ	LSP	20090701	0.00	140.10		Contractor (Steiny)
9P	726AZ	LSP	20090716	0.05	140.10	95.10	
9P	726AZ	LSP	20090722	0.05	140.10	95.10	
9P	726AZ	LSP	20090812	0.05	140.10	109.10	
9P	726AZ	LSP	20090826	0.10	140.10	108.10	
9P	726AZ	LSP	20090917	0.10	140.10	108.10	
9P	726AZ	LSP	20090925	0.10	140.10	108.10	
9P	726AZ	LSP	20091029	0.10	140.10	108.10	
9P	726AZ	LSP	20091202	0.10	140.10	108.10	
9P	726AZ	LSP	20091223	0.10	140.10	102.10	
9P	726AZ	LSP	20100211	0.10	140.10	107.10	
9P	726AZ	LSP	20100218	0.10	140.10	98.10	
9P	726AZ	LSP	20100317	0.15	140.10	133.10	
9P	726AZ	LSP	20100421	0.20	140.10	163.18	Under pressure
9P	726AZ	LSP	20100526	0.15	140.10	142.41	
9P	726AZ	LSP	20100616	0.15	140.10	142.41	
9P	726AZ	LSP	20100719	0.15	140.10	142.41	
9P	726AZ	LSP	20100812	0.15	140.10	142.41	
9P	726AZ	LSP	20100915	0.15	140.10	142.41	
9P	726AZ	LSP	20101020	0.15	140.10	83.10	

9P	726AZ	LSP	20101123	0.20	140.10	111.10	
9P	726AZ	LSP	20110106	0.25	140.10	117.10	
9P	726AZ	LSP	20110202	0.30	140.10	134.10	
9P	726AZ	LSP	20110317	0.10	140.10	77.10	
9P	726AZ	LSP	20110418	0.25	140.10		Went under
9P	726AZ	LSP	20110518	0.25	140.10	128.10	
9P	726AZ	LSP	20110707	0.20	140.10	93.10	
9P	726AZ	LSP	20110726	0.25	140.10	101.10	
9P	726AZ	LSP	20110825	0.10	140.10	142.41	
9P	726AZ	LSP	20110927	0.03	140.10	50.10	
9P	726AZ	LSP	20111018	0.05	140.10	55.10	
9P	726AZ	LSP	20111130	0.05	140.10	63.10	Q at arrival 0.06
9P	726AZ	LSP	20111227	0.05	140.10		Under redvlp
9P	726AZ	LSP	20120206	0.10	140.10	36.10	
9P	726AZ	LSP	20120313	0.20	140.10	94.10	
9P	726AZ	LSP	20120404	0.20	140.10	94.10	Q at arrival 0.25
9P	726AZ	LSP	20120424	0.20	140.10		Q at arrival 0.13
9P	726AZ	LSP	20120620	0.15	140.10		water leaks from
9P	726AZ	LSP	20120822	0.15	140.10		water leaks from
9P	726AZ	LSP	20121011	0.25	140.10		. Probe in meas
9P	726AZ	LSP	20121128	0.25	140.10		
9P	726AZ	LSP	20130128	0.30	140.10		
9P	726AZ	LSP	20130325	0.10	140.10		leak. no sound. Do
9P	726AZ	LSP	20130430	0.05	140.10		Under pressure at
9P	726AZ	LSP	20130605	0.05	140.10		
9P	726AZ	LSP	20130717	0.15	140.10		
9P	726AZ	LSP	20130828	0.15	140.10		
9P	726AZ	LSP	20131003	0.15	140.10	104.10	W.S. per telemetry
9P	726AZ	LSP	20131107	0.20	140.10	126.10	W.S. per telemetry
9P	726AZ	LSP	20131210	0.25	140.10	139.40	W.S. & casing psi
9P	726AZ	LSP	20140312	0.25	140.10	129.00	W.S. per telemetry

## LACFCD Seawater Barrier database: Historical Injection Rate Information - Well 9T1

PROJ	FCD	AQUIF	Date	Q (CFS)	RP_EL	ELEV	REMARKS
9T1	726BA	LSP	19760129	0.00	142.20	0.00	
9T1	726BA	LSP	19760226	0.00	142.20	0.00	
9T1	726BA	LSP	19760429	0.00	142.20	0.00	
9T1	726BA	LSP	19760526	0.00	142.20	-2.80	
9T1	726BA	LSP	19760701	0.00	142.20	-2.80	
9T1	726BA	LSP	19760729	0.00	142.20	0.00	
9T1	726BA	LSP	19760901	0.00	142.20	-3.40	
9T1	726BA	LSP	19761001	0.00	142.20	-3.30	
9T1	726BA	LSP	19761028	0.00	142.20	-3.30	
9T1	726BA	LSP	19761126	0.00	142.20	-3.30	
9T1	726BA	LSP	19761231	0.00	142.20	-3.30	
9T1	726BA	LSP	19770127	0.00	142.20	-3.30	
9T1	726BA	LSP	19770215	0.00	142.20	0.00	REDEVELOPMENT
9T1	726BA	LSP	19770303	0.00	142.20	0.00	REDEVELOPMENT
9T1	726BA	LSP	19770331	0.50	142.20	42.20	
9T1	726BA	LSP	19770429	0.77	142.20	46.00	
9T1	726BA	LSP	19770603	0.78	142.20	86.00	
9T1	726BA	LSP	19770630	0.83	142.20	129.60	
9T1	726BA	LSP	19770728	0.71	142.20	167.40	
9T1	726BA	LSP	19770901	0.60	142.20	188.20	
9T1	726BA	LSP	19770929	0.51	142.20	197.40	
9T1	726BA	LSP	19771027	0.35	142.20	178.90	
9T1	726BA	LSP	19771201	0.35	142.20	195.30	
9T1	726BA	LSP	19771229	0.31	142.20	202.00	
9T1	726BA	LSP	19780127	0.30	142.20	211.20	
9T1	726BA	LSP	19780224	0.17	142.20	172.00	
9T1	726BA	LSP	19780331	0.15	142.20	182.50	
9T1	726BA	LSP	19780427	0.15	142.20	200.00	
9T1	726BA	LSP	19780602	0.10	142.20	204.30	
9T1	726BA	LSP	19780630	0.10	142.20	197.40	
9T1	726BA	LSP	19780728	0.10	142.20	197.40	
9T1	726BA	LSP	19780901	0.10	142.20	190.60	
9T1	726BA	LSP	19780928	0.10	142.20	190.90	
9T1	726BA	LSP	19781103	0.10	142.20	185.90	
9T1	726BA	LSP	19781201	0.10	142.20	193.90	
9T1	726BA	LSP	19781229	0.10	142.20	165.80	
9T1	726BA	LSP	19790202	0.12	142.20	172.00	
9T1	726BA	LSP	19790301	0.00	142.20	0.00	
9T1	726BA	LSP	19790329	0.00	142.20	-2.10	
9T1	726BA	LSP	19790427	0.00	142.20	-1.90	
9T1	726BA	LSP	19790525	0.00	142.20	-3.00	
9T1	726BA	LSP	19790711	0.00	142.20	-4.20	
9T1	726BA	LSP	19790720	0.20	142.20	58.10	
9T1	726BA	LSP	19790830	0.15	142.20	130.00	
9T1	726BA	LSP	19790914	0.00	142.20	0.00	PRESSURE CHECK

9T1	726BA	LSP	19790927	0.19	142.20	176.70	
9T1	726BA	LSP	19791025	0.00	142.20	0.00	REDEVELOPMENT
9T1	726BA	LSP	19791102	0.00	142.20	0.00	
9T1	726BA	LSP	19791129	0.25	142.20	25.50	
9T1	726BA	LSP	19791227	0.26	142.20	31.60	
9T1	726BA	LSP	19800131	0.67	142.20	119.30	
9T1	726BA	LSP	19800227	0.55	142.20	142.10	
9T1	726BA	LSP	19800326	0.72	142.20	195.20	
9T1	726BA	LSP	19800501	0.61	142.20	211.30	
9T1	726BA	LSP	19800530	0.31	142.20	192.90	
9T1	726BA	LSP	19800626	0.30	142.20	196.50	
9T1	726BA	LSP	19800807	0.30	142.20	192.90	
9T1	726BA	LSP	19800904	0.31	142.20	199.80	
9T1	726BA	LSP	19801002	0.35	142.20	188.20	
9T1	726BA	LSP	19801030	0.32	142.20	197.50	
9T1	726BA	LSP	19801128	0.30	142.20	211.30	
9T1	726BA	LSP	19810102	0.12	142.20	144.40	
9T1	726BA	LSP	19810130	0.10	142.20	151.30	
9T1	726BA	LSP	19810226	0.11	142.20	157.80	
9T1	726BA	LSP	19810326	0.10	142.20	155.70	
9T1	726BA	LSP	19810430	0.10	142.20	163.60	
9T1	726BA	LSP	19810529	0.10	142.20	151.80	
9T1	726BA	LSP	19810702	0.10	142.20	165.20	
9T1	726BA	LSP	19810717	0.00	142.20	0.00	REPLACE VALVE
9T1	726BA	LSP	19810730	0.10	142.20	110.30	
9T1	726BA	LSP	19810827	0.20	142.20	106.00	
9T1	726BA	LSP	19811001	0.19	142.20	114.00	
9T1	726BA	LSP	19811029	0.20	142.20	115.80	
9T1	726BA	LSP	19811130	0.18	142.20	123.00	
9T1	726BA	LSP	19811223	0.20	142.20	124.70	
9T1	726BA	LSP	19820128	0.19	142.20	128.00	
9T1	726BA	LSP	19820224	0.12	142.20	133.50	
9T1	726BA	LSP	19820407	0.12	142.20	138.10	
9T1	726BA	LSP	19820504	0.19	142.20	138.30	
9T1	726BA	LSP	19820602	0.12	142.20	144.40	
9T1	726BA	LSP	19820630	0.15	142.20	144.40	
9T1	726BA	LSP	19820728	0.15	142.20	153.60	
9T1	726BA	LSP	19820910	0.12	142.20	144.40	
9T1	726BA	LSP	19820921	0.20	142.20	172.10	
9T1	726BA	LSP	19821102	0.29	142.20	181.30	
9T1	726BA	LSP	19821119	0.00	142.20	0.00	REDEVELOPMENT
9T1	726BA	LSP	19821202	0.00	142.20	0.20	REDEVELOPMENT
9T1	726BA	LSP	19830103	0.00	142.20	-3.40	NEEDS REASSEMBLY
9T1	726BA	LSP	19830128	0.29	142.20	19.10	
9T1	726BA	LSP	19830225	0.28	142.20	30.90	
9T1	726BA	LSP	19830330	0.43	142.20	45.60	
9T1	726BA	LSP	19830429	0.48	142.20	80.10	

9T1	726BA	LSP	19830526	0.60	142.20	112.10	
9T1	726BA	LSP	19830624	0.71	142.20	133.60	
9T1	726BA	LSP	19830722	0.72	142.20	140.30	
9T1	726BA	LSP	19830902	0.71	142.20	151.30	
9T1	726BA	LSP	19830906	0.00	142.20	0.00	REDEVELOPMENT
9T1	726BA	LSP	19830915	0.00	142.20	7.30	REDEVELOPMENT
9T1	726BA	LSP	19830929	0.75	142.20	89.10	
9T1	726BA	LSP	19831028	0.78	142.20	109.20	
9T1	726BA	LSP	19831108	0.00	142.20	0.00	PR STA. SECURED
9T1	726BA	LSP	19831208	0.69	142.20	111.50	
9T1	726BA	LSP	19840106	0.72	142.20	140.10	
9T1	726BA	LSP	19840202	0.68	142.20	160.60	
9T1	726BA	LSP	19840302	0.50	142.20	156.00	
9T1	726BA	LSP	19840328	0.50	142.20	153.60	
9T1	726BA	LSP	19840425	0.49	142.20	156.00	
9T1	726BA	LSP	19840509	0.00	142.20	6.00	REDEVELOPMENT
9T1	726BA	LSP	19840523	0.22	142.20	24.20	
9T1	726BA	LSP	19840628	0.60	142.20	89.30	
9T1	726BA	LSP	19840724	0.64	142.20	90.50	
9T1	726BA	LSP	19840829	0.57	142.20	101.40	
9T1	726BA	LSP	19840926	0.57	142.20	106.30	
9T1	726BA	LSP	19841030	0.56	142.20	108.50	
9T1	726BA	LSP	19841129	0.60	142.20	118.40	
9T1	726BA	LSP	19841227	0.57	142.20	126.20	
9T1	726BA	LSP	19850130	0.57	142.20	136.40	
9T1	726BA	LSP	19850227	0.55	142.20	142.10	
9T1	726BA	LSP	19850328	0.51	142.20	158.30	
9T1	726BA	LSP	19850410	0.00	142.20	5.10	REDEVELOPMENT
9T1	726BA	LSP	19850424	0.35	142.20	60.90	
9T1	726BA	LSP	19850530	0.48	142.20	124.00	
9T1	726BA	LSP	19850626	0.45	142.20	142.10	
9T1	726BA	LSP	19850730	0.41	142.20	158.60	
9T1	726BA	LSP	19850828	0.40	142.20	158.30	
9T1	726BA	LSP	19850910	0.00	142.20	0.00	INST HYDROELE
9T1	726BA	LSP	19851001	0.00	142.20	-2.90	HYDROELECTRIC
9T1	726BA	LSP	19851031	0.00	142.20	-3.90	HYDROELECTRIC
9T1	726BA	LSP	19851204	0.42	142.20	134.60	
9T1	726BA	LSP	19860103	0.41	142.20	140.20	
9T1	726BA	LSP	19860129	0.40	142.20	146.70	
9T1	726BA	LSP	19860227	0.38	142.20	165.20	
9T1	726BA	LSP	19860402	0.40	142.20	146.70	
9T1	726BA	LSP	19860408	0.00	142.20	0.00	REDEVELOPMENT
9T1	726BA	LSP	19860416	0.00	142.20	1.40	REDEVELOPMENT
9T1	726BA	LSP	19860501	0.40	142.20	58.80	
9T1	726BA	LSP	19860529	0.50	142.20	100.10	
9T1	726BA	LSP	19860703	0.47	142.20	120.00	
9T1	726BA	LSP	19860731	0.48	142.20	128.80	



9T1	726BA	LSP	19860827	0.44	142.20	131.20	
9T1	726BA	LSP	19861001	0.47	142.20	129.10	
9T1	726BA	LSP	19861030	0.45	142.20	133.10	
9T1	726BA	LSP	19861125	0.44	142.20	132.30	
9T1	726BA	LSP	19861231	0.49	142.20	142.10	
9T1	726BA	LSP	19870130	0.49	142.20	144.40	
9T1	726BA	LSP	19870225	0.48	142.20	146.70	
9T1	726BA	LSP	19870401	0.60	142.20	165.20	
9T1	726BA	LSP	19870429	0.60	142.20	167.50	
9T1	726BA	LSP	19870513	0.00	142.20	0.00	CHLOR&REDEVELOP
9T1	726BA	LSP	19870527	0.00	142.20	4.80	REDEV W/CHLORINE
9T1	726BA	LSP	19870702	0.60	142.20	82.50	
9T1	726BA	LSP	19870730	0.59	142.20	92.60	
9T1	726BA	LSP	19870828	0.59	142.20	99.20	
9T1	726BA	LSP	19870930	0.58	142.20	103.80	
9T1	726BA	LSP	19871028	0.58	142.20	104.10	
9T1	726BA	LSP	19871125	0.58	142.20	110.10	
9T1	726BA	LSP	19871230	0.52	142.20	127.10	
9T1	726BA	LSP	19880127	0.52	142.20	133.10	
9T1	726BA	LSP	19880224	0.50	142.20	0.00	FLOODED
9T1	726BA	LSP	19880330	0.50	142.20	146.70	
9T1	726BA	LSP	19880427	0.50	142.20	149.00	
9T1	726BA	LSP	19880503	0.00	142.20	0.00	REDEVELOPMENT
9T1	726BA	LSP	19880524	0.00	142.20	1.00	REDEVELOPMENT
9T1	726BA	LSP	19880629	0.50	142.20	97.50	
9T1	726BA	LSP	19880727	0.50	142.20	105.70	
9T1	726BA	LSP	19880831	0.50	142.20	107.30	
9T1	726BA	LSP	19880929	0.49	142.20	105.30	
9T1	726BA	LSP	19881026	0.50	142.20	106.70	
9T1	726BA	LSP	19881130	0.48	142.20	116.20	
9T1	726BA	LSP	19881229	0.45	142.20	122.20	
9T1	726BA	LSP	19890126	0.42	142.20	133.30	
9T1	726BA	LSP	19890223	0.42	142.20	139.20	
9T1	726BA	LSP	19890329	0.41	142.20	144.50	
9T1	726BA	LSP	19890504	0.40	142.20	144.00	
9T1	726BA	LSP	19890601	0.40	142.20	146.80	
9T1	726BA	LSP	19890628	0.40	142.20	151.30	
9T1	726BA	LSP	19890802	0.44	142.20	146.80	
9T1	726BA	LSP	19890830	0.43	142.20	142.20	
9T1	726BA	LSP	19890928	0.42	142.20	142.20	
9T1	726BA	LSP	19891102	0.45	142.20	142.20	
9T1	726BA	LSP	19891129	0.43	142.20	146.80	
9T1	726BA	LSP	19900104	0.41	142.20	153.70	
9T1	726BA	LSP	19900131	0.40	142.20	156.20	
9T1	726BA	LSP	19900228	0.40	142.20	160.60	
9T1	726BA	LSP	19900405	0.41	142.20	165.20	
9T1	726BA	LSP	19900503	0.40	142.20	165.20	

9T1	726BA	LSP	19900601	0.41	142.20	146.80	
9T1	726BA	LSP	19900705	0.40	142.20	144.50	
9T1	726BA	LSP	19900801	0.40	142.20	160.60	
9T1	726BA	LSP	19900830	0.41	142.20	156.00	
9T1	726BA	LSP	19901003	0.40	142.20	153.70	
9T1	726BA	LSP	19901031	0.42	142.20	158.30	
9T1	726BA	LSP	19901205	0.40	142.20	166.20	
9T1	726BA	LSP	19901228	0.39	142.20	165.30	
9T1	726BA	LSP	19910130	0.39	142.20	172.20	
9T1	726BA	LSP	19910227	0.00	142.20	0.00	REDEVELOPMENT
9T1	726BA	LSP	19910403	0.38	142.20	105.20	
9T1	726BA	LSP	19910501	0.40	142.20	104.20	
9T1	726BA	LSP	19910612	0.00	142.20	5.20	*
9T1	726BA	LSP	19910714	0.00	142.20	-2.80	MEASURED 910717
9T1	726BA	LSP	19910807	0.00	142.20	-3.70	OFF FOR CONSTR.
9T1	726BA	LSP	19910906	0.40	142.20	99.60	
9T1	726BA	LSP	19911003	0.36	142.20	99.40	
9T1	726BA	LSP	19911031	0.38	142.20	102.00	
9T1	726BA	LSP	19911127	0.35	142.20	106.80	
9T1	726BA	LSP	19911227	0.35	142.20	113.40	
9T1	726BA	LSP	19920129	0.35	142.20	126.10	
9T1	726BA	LSP	19920227	0.32	142.20	132.60	
9T1	726BA	LSP	19920408	0.31	142.20	106.90	
9T1	726BA	LSP	19920429	0.30	142.20	114.00	
9T1	726BA	LSP	19920604	0.30	142.20	116.70	
9T1	726BA	LSP	19920701	0.30	142.20	113.30	
9T1	726BA	LSP	19920805	0.30	142.20	110.80	
9T1	726BA	LSP	19920902	0.28	142.20	117.10	
9T1	726BA	LSP	19921002	0.30	142.20	116.30	
9T1	726BA	LSP	19921028	0.30	142.20	112.70	
9T1	726BA	LSP	19921203	0.31	142.20	124.00	
9T1	726BA	LSP	19921217	0.30	142.20	131.00	
9T1	726BA	LSP	19930128	0.28	142.20	139.40	
9T1	726BA	LSP	19930224	0.00	142.20	-0.80	
9T1	726BA	LSP	19930331	0.22	142.20	113.30	
9T1	726BA	LSP	19930428	0.22	142.20	117.80	
9T1	726BA	LSP	19930603	0.22	142.20	119.40	
9T1	726BA	LSP	19930630	0.22	142.20	117.40	
9T1	726BA	LSP	19930728	0.25	142.20	112.70	
9T1	726BA	LSP	19930826	0.25	142.20	115.20	
9T1	726BA	LSP	19931001	0.29	142.20	114.20	
9T1	726BA	LSP	19931027	0.25	142.20	117.20	
9T1	726BA	LSP	19931124	0.27	142.20	124.00	
9T1	726BA	LSP	19931227	0.29	142.20	132.20	
9T1	726BA	LSP	19940127	0.29	142.20	134.00	
9T1	726BA	LSP	19940302	0.29	142.20	137.20	
9T1	726BA	LSP	19940323	0.29	142.20	135.70	

9T1	726BA	LSP	19940423	0.00	142.20	-0.10	OFF
9T1	726BA	LSP	19940523	0.00	142.20	-0.10	OFF
9T1	726BA	LSP	19940706	0.33	142.20	125.20	
9T1	726BA	LSP	19940803	0.31	142.20	118.20	
9T1	726BA	LSP	19940902	0.00	142.20	9.00	REPAIR
9T1	726BA	LSP	19940929	0.30	142.20	127.20	
9T1	726BA	LSP	19941027	0.30	142.20	130.70	
9T1	726BA	LSP	19941130	0.30	142.20	140.30	
9T1	726BA	LSP	19941229	0.30	142.20	146.80	
9T1	726BA	LSP	19950120	0.00	142.20	8.00	
9T1	726BA	LSP	19950320	0.00	142.20	8.00	
9T1	726BA	LSP	19950426	0.30	142.20	131.40	
9T1	726BA	LSP	19950601	0.30	142.20	87.80	
9T1	726BA	LSP	19950628	0.20	142.20	100.70	
9T1	726BA	LSP	19950726	0.29	142.20	49.50	
9T1	726BA	LSP	19950901	0.29	142.20	34.90	
9T1	726BA	LSP	19950920	0.29	142.20	105.20	
9T1	726BA	LSP	19951101	0.38	142.20	113.20	
9T1	726BA	LSP	19951213	0.00	142.20	0.00	NO WS EL
9T1	726BA	LSP	19951228	0.25	142.20	113.80	
9T1	726BA	LSP	19960105	0.25	142.20	120.80	
9T1	726BA	LSP	19960110	0.25	142.20	124.90	
9T1	726BA	LSP	19960118	0.25	142.20	130.10	
9T1	726BA	LSP	19960123	0.25	142.20	131.70	
9T1	726BA	LSP	19960201	0.25	142.20	131.70	
9T1	726BA	LSP	19960208	0.22	142.20	137.20	
9T1	726BA	LSP	19960214	0.25	142.20	138.70	
9T1	726BA	LSP	19960228	0.21	142.20	136.70	
9T1	726BA	LSP	19960307	0.21	142.20	145.80	
9T1	726BA	LSP	19960319	0.30	142.20	156.00	
9T1	726BA	LSP	19960326	0.29	142.20	151.40	
9T1	726BA	LSP	19960403	0.30	142.20	166.20	
9T1	726BA	LSP	19960409	0.25	142.20	162.90	
9T1	726BA	LSP	19960416	0.25	142.20	162.90	
9T1	726BA	LSP	19960423	0.30	142.20	151.40	
9T1	726BA	LSP	19960501	0.29	142.20	153.70	
9T1	726BA	LSP	19960509	0.29	142.20	163.90	
9T1	726BA	LSP	19960514	0.29	142.20	158.30	
9T1	726BA	LSP	19960523	0.29	142.20	158.30	
9T1	726BA	LSP	19960530	0.29	142.20	158.30	
9T1	726BA	LSP	19960603	0.29	142.20	209.10	
9T1	726BA	LSP	19960610	0.25	142.20	146.80	
9T1	726BA	LSP	19960617	0.26	142.20	151.40	
9T1	726BA	LSP	19960624	0.24	142.20	151.40	
9T1	726BA	LSP	19960731	0.21	142.20	158.40	
9T1	726BA	LSP	19960807	0.22	142.20	158.40	
9T1	726BA	LSP	19960814	0.22	142.20	156.00	

9T1	726BA	LSP	19960829	0.22	142.20	156.00	
9T1	726BA	LSP	19960910	0.21	142.20	156.00	
9T1	726BA	LSP	19960917	0.15	142.20	153.70	
9T1	726BA	LSP	19960919	0.00	142.20	8.00	
9T1	726BA	LSP	19960924	0.00	142.20	8.00	
9T1	726BA	LSP	19961001	0.15	142.20	8.00	Well On
9T1	726BA	LSP	19961010	0.21	142.20	109.70	
9T1	726BA	LSP	19961016	0.15	142.20	109.00	
9T1	726BA	LSP	19961023	0.20	142.20	111.90	
9T1	726BA	LSP	19961107	0.21	142.20	117.10	
9T1	726BA	LSP	19961120	0.20	142.20	120.80	
9T1	726BA	LSP	19961204	0.24	142.20	127.20	
9T1	726BA	LSP	19961220	0.22	142.20	138.30	
9T1	726BA	LSP	19970106	0.24	142.20	144.50	
9T1	726BA	LSP	19970131	0.21	142.20	151.40	
9T1	726BA	LSP	19970205	0.25	142.20	153.70	
9T1	726BA	LSP	19970213	0.22	142.20	151.40	
9T1	726BA	LSP	19970220	0.24	142.20	153.70	
9T1	726BA	LSP	19970227	0.24	142.20	151.40	
9T1	726BA	LSP	19970306	0.00	142.20	142.20	Off redevelopment
9T1	726BA	LSP	19970318	0.00	142.20	142.20	Redevelopment
9T1	726BA	LSP	19970325	0.00	142.20	142.20	Redevelopment
9T1	726BA	LSP	19970402	0.00	142.20	142.20	Redevelopment
9T1	726BA	LSP	19970417	0.00	142.20	0.30	Redevelopment
9T1	726BA	LSP	19970515	0.00	142.20	125.20	Redevelopment
9T1	726BA	LSP	19970604	0.30	142.20	90.20	Q=0.0/0.30 5/15
9T1	726BA	LSP	19970610	0.29	142.20	88.20	
9T1	726BA	LSP	19970618	0.29	142.20	95.20	
9T1	726BA	LSP	19970626	0.29	142.20	87.20	
9T1	726BA	LSP	19970707	0.29	142.20	82.50	
9T1	726BA	LSP	19970717	0.29	142.20	82.20	
9T1	726BA	LSP	19970722	0.40	142.20	102.20	
9T1	726BA	LSP	19970813	0.40	142.20	106.20	
9T1	726BA	LSP	19970904	0.40	142.20	111.80	
9T1	726BA	LSP	19970912	0.40	142.20	112.20	
9T1	726BA	LSP	19970922	0.40	142.20	112.20	
9T1	726BA	LSP	19971002	0.48	142.20	117.20	
9T1	726BA	LSP	19971009	0.48	142.20	137.20	
9T1	726BA	LSP	19971022	0.48	142.20	137.20	
9T1	726BA	LSP	19971030	0.48	142.20	144.50	
9T1	726BA	LSP	19971105	0.45	142.20	149.10	
9T1	726BA	LSP	19971120	0.45	142.20	144.50	
9T1	726BA	LSP	19971203	0.43	142.20	158.40	
9T1	726BA	LSP	19971210	0.43	142.20	160.70	
9T1	726BA	LSP	19971231	0.41	142.20	160.70	
9T1	726BA	LSP	19980108	0.42	142.20	165.30	
9T1	726BA	LSP	19980116	0.42	142.20	165.30	

9T1	726BA	LSP	19980121	0.42	142.20	169.90	
9T1	726BA	LSP	19980128	0.42	142.20	169.90	
9T1	726BA	LSP	19980213	0.41	142.20	169.90	
9T1	726BA	LSP	19980226	0.40	142.20	176.80	
9T1	726BA	LSP	19980304	0.40	142.20	176.80	
9T1	726BA	LSP	19980319	0.33	142.20	167.60	psi=15\11-03/19
9T1	726BA	LSP	19980331	0.33	142.20	165.30	psi 14/10
9T1	726BA	LSP	19980407	0.33	142.20	165.30	
9T1	726BA	LSP	19980414	0.33	142.20	165.30	
9T1	726BA	LSP	19980430	0.33	142.20	169.89	
9T1	726BA	LSP	19980505	0.28	142.20	167.58	
9T1	726BA	LSP	19980608	0.26	142.20	165.28	
9T1	726BA	LSP	19980615	0.26	142.20	169.89	
9T1	726BA	LSP	19980622	0.25	142.20	172.20	
9T1	726BA	LSP	19980624	0.25	142.20	172.20	
9T1	726BA	LSP	19980701	0.25	142.20	169.89	
9T1	726BA	LSP	19980706	0.24	142.20	165.28	
9T1	726BA	LSP	19980716	0.26	142.20	172.20	
9T1	726BA	LSP	19980723	0.22	142.20	165.28	
9T1	726BA	LSP	19980730	0.24	142.20	169.89	
9T1	726BA	LSP	19980805	0.23	142.20	169.89	
9T1	726BA	LSP	19980817	0.23	142.20	165.28	
9T1	726BA	LSP	19980915	0.24	142.20	169.89	
9T1	726BA	LSP	19980928	0.26	142.20	160.66	
9T1	726BA	LSP	19981005	0.26	142.20	160.66	
9T1	726BA	LSP	19981015	0.24	142.20	165.28	
9T1	726BA	LSP	19981022	0.24	142.20	165.28	
9T1	726BA	LSP	19981224	0.28	142.20	165.28	
9T1	726BA	LSP	19981229	0.28	142.20	165.28	
9T1	726BA	LSP	19990104	0.20	142.20	165.28	
9T1	726BA	LSP	19990111	0.20	142.20	165.28	
9T1	726BA	LSP	19990125	0.22	142.20	165.28	
9T1	726BA	LSP	19990222	0.22	142.20	165.28	
9T1	726BA	LSP	19990308	0.24	142.20	165.28	
9T1	726BA	LSP	19990316	0.27	142.20	160.66	
9T1	726BA	LSP	19990329	0.28	142.20	160.66	
9T1	726BA	LSP	19990412	0.28	142.20	160.66	
9T1	726BA	LSP	19990504	0.29	142.20	160.66	
9T1	726BA	LSP	19990607	0.28	142.20	146.82	
9T1	726BA	LSP	19990614	0.26	142.20	169.89	
9T1	726BA	LSP	19990722	0.34	142.20	169.89	
9T1	726BA	LSP	19990810	0.30	142.20	176.82	
9T1	726BA	LSP	19990817	0.30	142.20	169.89	
9T1	726BA	LSP	19990823	0.34	142.20	169.89	
9T1	726BA	LSP	19990908	0.26	142.20	169.89	
9T1	726BA	LSP	19990913	0.24	142.20	169.89	
9T1	726BA	LSP	19991021	0.00	142.20	142.20	So. Ca line H2O leak

9T1	726BA	LSP	19991025	0.25	142.20	142.20	
9T1	726BA	LSP	19991104	0.33	142.20	120.20	
9T1	726BA	LSP	19991122	0.32	142.20	122.20	
9T1	726BA	LSP	19991206	0.75	142.20	130.70	
9T1	726BA	LSP	19991213	0.32	142.20	128.60	
9T1	726BA	LSP	19991220	0.74	142.20	130.20	
9T1	726BA	LSP	19991227	0.34	142.20	129.60	
9T1	726BA	LSP	20000125	0.33	142.20	133.20	
9T1	726BA	LSP	20000203	0.33	142.20	136.20	
9T1	726BA	LSP	20000301	0.32	142.20	141.10	
9T1	726BA	LSP	20000313	0.00	142.20	3.10	
9T1	726BA	LSP	20000424	0.00	142.20	3.20	
9T1	726BA	LSP	20000508	0.00	142.20	3.20	
9T1	726BA	LSP	20000614	0.30	142.20	2.50	Start Up Q=0.15
9T1	726BA	LSP	20000629	0.30	142.20	87.20	Start Up Q=0.15
9T1	726BA	LSP	20000711	0.30	142.20	92.50	Start Up Q=0.15
9T1	726BA	LSP	20000725	0.40	142.20	96.50	Q=0.30/0.40
9T1	726BA	LSP	20000811	0.40	142.20	111.90	
9T1	726BA	LSP	20000830	0.38	142.20	125.20	
9T1	726BA	LSP	20000907	0.37	142.20	125.20	
9T1	726BA	LSP	20000918	0.38	142.20	123.70	
9T1	726BA	LSP	20001006	0.37	142.20	130.20	
9T1	726BA	LSP	20001025	0.36	142.20	144.51	
9T1	726BA	LSP	20001108	0.35	142.20	146.82	
9T1	726BA	LSP	20001211	0.32	142.20	165.28	
9T1	726BA	LSP	20001214	0.25	142.20	165.28	
9T1	726BA	LSP	20010117	0.25	142.20	169.89	
9T1	726BA	LSP	20010125	0.32	142.20	172.20	
9T1	726BA	LSP	20010215	0.28	142.20	165.28	
9T1	726BA	LSP	20010308	0.27	142.20	120.90	
9T1	726BA	LSP	20010314	0.26	142.20	125.50	
9T1	726BA	LSP	20010321	0.27	142.20	127.50	
9T1	726BA	LSP	20010404	0.25	142.20	133.70	
9T1	726BA	LSP	20010411	0.26	142.20	135.30	
9T1	726BA	LSP	20010419	0.25	142.20	137.20	
9T1	726BA	LSP	20010503	0.25	142.20	127.20	
9T1	726BA	LSP	20010510	0.25	142.20	127.20	
9T1	726BA	LSP	20010518	0.26	142.20	129.51	0
9T1	726BA	LSP	20010531	0.26	142.20	127.20	
9T1	726BA	LSP	20010606	0.24	142.20	127.20	
9T1	726BA	LSP	20010613	0.24	142.20	129.80	
9T1	726BA	LSP	20010705	0.23	142.20	139.30	
9T1	726BA	LSP	20010726	0.24	142.20	140.40	
9T1	726BA	LSP	20010810	0.26	142.20	133.90	
9T1	726BA	LSP	20010926	0.24	142.20	134.10	
9T1	726BA	LSP	20011011	0.24	142.20	133.80	
9T1	726BA	LSP	20011023	0.23	142.20	143.35	0

9T1	726BA	LSP	20011031	0.23	142.20	145.66	0
9T1	726BA	LSP	20011107	0.24	142.20	145.66	
9T1	726BA	LSP	20011204	0.23	142.20	127.20	
9T1	726BA	LSP	20011210	0.23	142.20	127.20	
9T1	726BA	LSP	20011220	0.24	142.20	128.90	
9T1	726BA	LSP	20020115	0.21	142.20	128.90	FLOODED/PUMP
9T1	726BA	LSP	20020204	0.22	142.20	150.28	UNDER PRESSURE
9T1	726BA	LSP	20020221	0.22	142.20	118.60	UNDER PRESSURE
9T1	726BA	LSP	20020227	0.24	142.20	126.10	UNDER PRESSURE
9T1	726BA	LSP	20020307	0.23	142.20	126.10	UNDER PRESSURE
9T1	726BA	LSP	20020314	0.22	142.20	126.10	UNDER PRESSURE
9T1	726BA	LSP	20020404	0.22	142.20	118.60	
9T1	726BA	LSP	20020425	0.22	142.20	128.40	
9T1	726BA	LSP	20020508	0.21	142.20	128.40	
9T1	726BA	LSP	20020522	0.21	142.20	128.40	
9T1	726BA	LSP	20020606	0.20	142.20	128.40	
9T1	726BA	LSP	20020612	0.20	142.20	139.90	
9T1	726BA	LSP	20020711	0.20	142.20	139.90	WELL FLD
9T1	726BA	LSP	20020726	0.20	142.20	139.90	
9T1	726BA	LSP	20020826	0.21	142.20	139.90	
9T1	726BA	LSP	20020905	0.20	142.20	144.51	
9T1	726BA	LSP	20020920	0.20	142.20	109.90	
9T1	726BA	LSP	20021004	0.20	142.20	132.10	
9T1	726BA	LSP	20021018	0.20	142.20	134.30	
9T1	726BA	LSP	20021104	0.20	142.20	134.30	
9T1	726BA	LSP	20021126	0.20	142.20	142.20	
9T1	726BA	LSP	20021207	0.20	142.20	142.20	
9T1	726BA	LSP	20030108	0.20	142.20	142.20	
9T1	726BA	LSP	20030124	0.20	142.20	142.20	
9T1	726BA	LSP	20030210	0.20	142.20	142.20	
9T1	726BA	LSP	20030220	0.20	142.20	142.20	
9T1	726BA	LSP	20030318	0.18	142.20	98.40	0
9T1	726BA	LSP	20030325	0.20	142.20	98.40	0
9T1	726BA	LSP	20030507	0.20	142.20	179.12	
9T1	726BA	LSP	20030521	0.20	142.20	158.20	
9T1	726BA	LSP	20030609	0.20	142.20	158.20	
9T1	726BA	LSP	20030624	0.20	142.20	97.20	
9T1	726BA	LSP	20030710	0.20	142.20	248.35	
9T1	726BA	LSP	20030904	0.22	142.20	143.35	0
9T1	726BA	LSP	20031010	0.22	142.20	122.58	
9T1	726BA	LSP	20031106	0.23	142.20	124.89	
9T1	726BA	LSP	20031211	0.22	142.20	161.82	
9T1	726BA	LSP	20031229	0.20	142.20	143.35	
9T1	726BA	LSP	20040114	0.21	142.20	141.05	
9T1	726BA	LSP	20040203	0.22	142.20	177.97	
9T1	726BA	LSP	20040211	0.00	142.20	0.00	WELL
9T1	726BA	LSP	20040305	0.18	142.20	71.20	

9T1	726BA	LSP	20040401	0.18	142.20	72.20	
9T1	726BA	LSP	20040414	0.19	142.20	74.80	
9T1	726BA	LSP	20040513	0.12	142.20	74.10	
9T1	726BA	LSP	20040603	0.19	142.20	72.50	
9T1	726BA	LSP	20040701	0.20	142.20	71.40	
9T1	726BA	LSP	20040708	0.20	142.20	71.40	
9T1	726BA	LSP	20040715	0.20	142.20	71.40	
9T1	726BA	LSP	20040812	0.17	142.20	69.00	
9T1	726BA	LSP	20040824	0.00	142.20	62.20	OFF 8-19-04/WATER
9T1	726BA	LSP	20040903	0.00	142.20	62.20	OFF /WATER IN WELL
9T1	726BA	LSP	20040929	0.20	142.20	64.20	0
9T1	726BA	LSP	20041006	0.22	142.20	66.20	
9T1	726BA	LSP	20041104	0.37	142.20	70.20	
9T1	726BA	LSP	20041222	0.21	142.20	72.40	
9T1	726BA	LSP	20050414	0.23	142.20	67.00	
9T1	726BA	LSP	20050421	0.21	142.20	69.20	Q=0.19/0.21
9T1	726BA	LSP	20050504	0.24	142.20	74.20	0
9T1	726BA	LSP	20050526	0.24	142.20	73.20	
9T1	726BA	LSP	20050609	0.22	142.20	74.20	
9T1	726BA	LSP	20050616	0.22	142.20	76.20	
9T1	726BA	LSP	20050627	0.22	142.20	74.20	
9T1	726BA	LSP	20050728	0.22	142.20	75.20	0
9T1	726BA	LSP	20050804	0.22	142.20	74.20	
9T1	726BA	LSP	20050817	0.22	142.20	74.20	
9T1	726BA	LSP	20050824	0.22	142.20	75.20	
9T1	726BA	LSP	20050906	0.22	142.20	75.20	
9T1	726BA	LSP	20050919	0.22	142.20	74.20	
9T1	726BA	LSP	20051031	0.24	142.20	81.20	
9T1	726BA	LSP	20051117	0.24	142.20	85.20	
9T1	726BA	LSP	20051201	0.23	142.20	86.20	
9T1	726BA	LSP	20060106	0.23	142.20	88.20	
9T1	726BA	LSP	20060118	0.24	142.20	90.20	
9T1	726BA	LSP	20060302	0.24	142.20	88.20	
9T1	726BA	LSP	20060425	0.00	142.20	64.20	No Q, Check main
9T1	726BA	LSP	20060508	0.00	142.20	52.20	Q Valve Spins
9T1	726BA	LSP	20060802	0.00	142.20	34.20	NEED TO REPLACE Q
9T1	726BA	LSP	20060814	0.00	142.20	34.20	Need to replace Q-
9T1	726BA	LSP	20060907	0.00	142.20		Replace Q valve
9T1	726BA	LSP	20061012	0.00	142.20	40.20	
9T1	726BA	LSP	20061019	0.00	142.20	40.20	
9T1	726BA	LSP	20061206	0.22	142.20	96.20	
9T1	726BA	LSP	20061226	0.22	142.20	96.20	
9T1	726BA	LSP	20070104	0.22	142.20	96.20	
9T1	726BA	LSP	20070110	0.22	142.20	95.20	
9T1	726BA	LSP	20070131	0.22	142.20	95.20	
9T1	726BA	LSP	20070208	0.22	142.20	95.20	
9T1	726BA	LSP	20070215	0.22	142.20	95.20	



9T1	726BA	LSP	20070228	0.22	142.20	95.20	
9T1	726BA	LSP	20070314	0.22	142.20	95.20	
9T1	726BA	LSP	20070319	0.18	142.20	122.20	
9T1	726BA	LSP	20070502	0.00	142.20	122.20	
9T1	726BA	LSP	20070511	0.00	142.20	122.20	
9T1	726BA	LSP	20070516	0.00	142.20	122.20	
9T1	726BA	LSP	20070606	0.20	142.20	112.20	
9T1	726BA	LSP	20070613	0.20	142.20	112.20	
9T1	726BA	LSP	20070627	0.20	142.20	112.20	
9T1	726BA	LSP	20070706	0.18	142.20	10.20	
9T1	726BA	LSP	20070711	0.18	142.20	5.20	
9T1	726BA	LSP	20070726	0.18	142.20	129.20	
9T1	726BA	LSP	20070801	0.18	142.20	129.20	
9T1	726BA	LSP	20070816	0.18	142.20	129.20	
9T1	726BA	LSP	20070822	0.18	142.20	129.20	
9T1	726BA	LSP	20070913	0.18	142.20	129.20	
9T1	726BA	LSP	20070919	0.18	142.20	129.20	
9T1	726BA	LSP	20070926	0.18	142.20	129.20	
9T1	726BA	LSP	20071015	0.18	142.20	129.20	
9T1	726BA	LSP	20071018	0.18	142.20	129.20	
9T1	726BA	LSP	20071022	0.20	142.20	144.50	
9T1	726BA	LSP	20071031	0.20	142.20	144.50	
9T1	726BA	LSP	20071105	0.20	142.20	144.50	
9T1	726BA	LSP	20071113	0.20	142.20	144.50	
9T1	726BA	LSP	20071203	0.20	142.20	144.50	
9T1	726BA	LSP	20071206	0.20	142.20	144.50	
9T1	726BA	LSP	20071212	0.20	142.20	144.50	
9T1	726BA	LSP	20071221	0.20	142.20	144.50	
9T1	726BA	LSP	20080108	0.20	142.20	144.50	
9T1	726BA	LSP	20080116	0.20	142.20	144.50	
9T1	726BA	LSP	20080123	0.20	142.20	144.50	
9T1	726BA	LSP	20080131	0.20	142.20	144.50	
9T1	726BA	LSP	20080206	0.18	142.20	144.50	
9T1	726BA	LSP	20080213	0.18	142.20	144.50	
9T1	726BA	LSP	20080221	0.00	142.20		Disassembled for
9T1	726BA	LSP	20080227	0.00	142.20		Disassembled for
9T1	726BA	LSP	20080312	0.00	142.20		Disassembled for
9T1	726BA	LSP	20080402	0.20	142.20	93.20	
9T1	726BA	LSP	20080408	0.20	142.20	96.20	
9T1	726BA	LSP	20080416	0.20	142.20	96.20	
9T1	726BA	LSP	20080430	0.20	142.20	96.20	
9T1	726BA	LSP	20080514	0.20	142.20	106.20	
9T1	726BA	LSP	20080521	0.20	142.20	106.20	
9T1	726BA	LSP	20080630	0.26	142.20	109.00	
9T1	726BA	LSP	20080714	0.26	142.20	109.00	
9T1	726BA	LSP	20080717	0.26	142.20	109.20	
9T1	726BA	LSP	20080723	0.25	142.20	119.20	

9T1	726BA	LSP	20080812	0.24	142.20	122.20	
9T1	726BA	LSP	20081103	0.24	142.20	114.20	
9T1	726BA	LSP	20081210	0.23	142.20	132.20	
9T1	726BA	LSP	20081219	0.22	142.20	133.20	
9T1	726BA	LSP	20090107	0.22	142.20	131.20	
9T1	726BA	LSP	20090114	0.22	142.20	131.20	
9T1	726BA	LSP	20090130	0.23	142.20	133.20	
9T1	726BA	LSP	20090203	0.23	142.20	130.20	
9T1	726BA	LSP	20090212	0.22	142.20	132.20	
9T1	726BA	LSP	20090226	0.22	142.20	132.20	
9T1	726BA	LSP	20090312	0.22	142.20	133.20	
9T1	726BA	LSP	20090318	0.20	142.20	135.20	
9T1	726BA	LSP	20090325	0.20	142.20	138.20	
9T1	726BA	LSP	20090401	0.32	142.20	0.20	Flooded.
9T1	726BA	LSP	20090408	0.25	142.20	149.13	
9T1	726BA	LSP	20090416	0.25	142.20	127.20	
9T1	726BA	LSP	20090604	0.10	142.20	-2.11	
9T1	726BA	LSP	20090611	0.10	142.20	144.51	
9T1	726BA	LSP	20090701	0.10	142.20	144.51	
9T1	726BA	LSP	20090716	0.05	142.20	144.51	
9T1	726BA	LSP	20090722	0.08	142.20	144.51	
9T1	726BA	LSP	20090812	0.10	142.20	144.51	
9T1	726BA	LSP	20090826	0.10	142.20	144.51	
9T1	726BA	LSP	20090917	0.05	142.20	144.51	
9T1	726BA	LSP	20090925	0.05	142.20	144.51	
9T1	726BA	LSP	20091029	0.05	142.20	144.51	
9T1	726BA	LSP	20091202	0.05	142.20	144.51	
9T1	726BA	LSP	20091223	0.05	142.20	144.51	
9T1	726BA	LSP	20100211	0.05	142.20	144.51	
9T1	726BA	LSP	20100218	0.00	142.20		Steiny working on top
9T1	726BA	LSP	20100317	0.10	142.20	144.51	
9T1	726BA	LSP	20100421	0.10	142.20	144.51	
9T1	726BA	LSP	20100526	0.10	142.20	144.51	
9T1	726BA	LSP	20100616	0.10	142.20	144.51	
9T1	726BA	LSP	20100719	0.10	142.20	144.51	
9T1	726BA	LSP	20100812	0.10	142.20	144.51	
9T1	726BA	LSP	20100915	0.10	142.20	14.20	
9T1	726BA	LSP	20101021	0.15	142.20	59.20	
9T1	726BA	LSP	20101123	0.20	142.20	64.20	
9T1	726BA	LSP	20110106	0.25	142.20	67.20	
9T1	726BA	LSP	20110202	0.30	142.20	92.20	
9T1	726BA	LSP	20110317	0.10	142.20	144.51	
9T1	726BA	LSP	20110418	0.10	142.20	144.51	
9T1	726BA	LSP	20110518	0.10	142.20	144.51	
9T1	726BA	LSP	20110707	0.10	142.20	144.51	
9T1	726BA	LSP	20110726	0.05	142.20	144.51	
9T1	726BA	LSP	20110825	0.10	142.20	144.51	

9T1	726BA	LSP	20110928	0.05	142.20		
9T1	726BA	LSP	20111018	0.10	142.20	144.51	
9T1	726BA	LSP	20111130	0.10	142.20	144.51	
9T1	726BA	LSP	20111227	0.10	142.20	144.51	
9T1	726BA	LSP	20120206	0.10	142.20	144.51	
9T1	726BA	LSP	20120314	0.10	142.20	144.51	
9T1	726BA	LSP	20120404	0.10	142.20	146.82	
9T1	726BA	LSP	20120424	0.10	142.20	144.51	
9T1	726BA	LSP	20120620	0.10	142.20		probe in meas tube.
9T1	726BA	LSP	20120822	0.10	142.20		probe in meas tube.
9T1	726BA	LSP	20121011	0.25	142.20		probe in meas tube.
9T1	726BA	LSP	20121129	0.25	142.20		Q at arrival 0.22.
9T1	726BA	LSP	20130129	0.20	142.20		
9T1	726BA	LSP	20130325	0.05	142.20	2.20	
9T1	726BA	LSP	20130430	0.05	142.20	2.20	Can't raise Q, go
9T1	726BA	LSP	20130605	0.15	142.20		
9T1	726BA	LSP	20130717	0.20	142.20		
9T1	726BA	LSP	20130828	0.25	142.20		
9T1	726BA	LSP	20131003	0.30	142.20	108.20	W.S. per telemetry
9T1	726BA	LSP	20131107	0.35	142.20	122.20	W.S. per telemetry
9T1	726BA	LSP	20131210	0.40	142.20	135.60	W.S. & casing psi per
9T1	726BA	LSP	20140312	0.40	142.20	108.30	W.S. per telemetry

## LACFCD Seawater Barrier database: Historical Injection Rate Information - Well 9V1

PROJ	FCD	AQUIF	Date	Q (CFS)	RP_EL	ELEV	REMARKS
9V1	727AS	LSP	19760130	0.32	128.30	110.20	
9V1	727AS	LSP	19760227	0.33	128.30	128.30	
9V1	727AS	LSP	19760402	0.31	128.30	152.80	
9V1	727AS	LSP	19760430	0.30	128.30	156.00	
9V1	727AS	LSP	19760526	0.30	128.30	154.80	
9V1	727AS	LSP	19760701	0.24	128.30	181.40	
9V1	727AS	LSP	19760729	0.25	128.30	187.30	
9V1	727AS	LSP	19760901	0.21	128.30	190.60	
9V1	727AS	LSP	19761001	0.22	128.30	190.60	
9V1	727AS	LSP	19761028	0.21	128.30	188.30	
9V1	727AS	LSP	19761126	0.20	128.30	197.50	
9V1	727AS	LSP	19761231	0.20	128.30	197.50	
9V1	727AS	LSP	19770127	0.21	128.30	200.10	
9V1	727AS	LSP	19770303	0.12	128.30	206.80	
9V1	727AS	LSP	19770331	0.00	128.30	1.30	
9V1	727AS	LSP	19770429	0.00	128.30	0.00	REDEVELOPMENT
9V1	727AS	LSP	19770603	0.25	128.30	16.30	
9V1	727AS	LSP	19770630	0.50	128.30	35.20	
9V1	727AS	LSP	19770728	0.50	128.30	32.80	
9V1	727AS	LSP	19770901	0.50	128.30	48.30	
9V1	727AS	LSP	19770929	0.65	128.30	78.30	
9V1	727AS	LSP	19771027	0.69	128.30	88.30	
9V1	727AS	LSP	19771201	0.70	128.30	101.80	
9V1	727AS	LSP	19771229	0.68	128.30	123.80	
9V1	727AS	LSP	19780127	0.62	128.30	142.20	
9V1	727AS	LSP	19780224	0.59	128.30	156.00	
9V1	727AS	LSP	19780331	0.55	128.30	167.50	
9V1	727AS	LSP	19780428	0.50	128.30	188.30	
9V1	727AS	LSP	19780602	0.45	128.30	197.60	
9V1	727AS	LSP	19780630	0.45	128.30	195.20	
9V1	727AS	LSP	19780728	0.41	128.30	197.60	
9V1	727AS	LSP	19780901	0.42	128.30	197.60	
9V1	727AS	LSP	19780928	0.45	128.30	196.40	
9V1	727AS	LSP	19781103	0.44	128.30	201.80	
9V1	727AS	LSP	19781201	0.42	128.30	203.30	
9V1	727AS	LSP	19781229	0.25	128.30	154.10	
9V1	727AS	LSP	19790202	0.25	128.30	167.50	
9V1	727AS	LSP	19790301	0.27	128.30	92.90	
9V1	727AS	LSP	19790329	0.25	128.30	128.30	
9V1	727AS	LSP	19790427	0.22	128.30	134.00	
9V1	727AS	LSP	19790525	0.25	128.30	146.80	
9V1	727AS	LSP	19790702	0.00	128.30	2.40	
9V1	727AS	LSP	19790713	0.00	128.30	20.90	
9V1	727AS	LSP	19790720	0.25	128.30	102.90	
9V1	727AS	LSP	19790829	0.29	128.30	112.20	

9V1	727AS	LSP	19790927	0.29	128.30	41.00	
9V1	727AS	LSP	19791102	0.28	128.30	60.60	
9V1	727AS	LSP	19791129	0.30	128.30	69.80	
9V1	727AS	LSP	19791227	0.30	128.30	81.70	
9V1	727AS	LSP	19800131	0.50	128.30	120.60	
9V1	727AS	LSP	19800227	0.48	128.30	132.90	
9V1	727AS	LSP	19800326	0.45	128.30	143.20	
9V1	727AS	LSP	19800501	0.41	128.30	151.40	
9V1	727AS	LSP	19800530	0.40	128.30	160.60	
9V1	727AS	LSP	19800626	0.40	128.30	165.20	
9V1	727AS	LSP	19800807	0.39	128.30	167.50	
9V1	727AS	LSP	19800904	0.39	128.30	172.10	
9V1	727AS	LSP	19801002	0.40	128.30	160.60	
9V1	727AS	LSP	19801030	0.40	128.30	169.80	
9V1	727AS	LSP	19801128	0.35	128.30	181.40	
9V1	727AS	LSP	19810102	0.32	128.30	195.20	
9V1	727AS	LSP	19810130	0.15	128.30	167.50	
9V1	727AS	LSP	19810226	0.20	128.30	175.40	
9V1	727AS	LSP	19810326	0.14	128.30	174.70	
9V1	727AS	LSP	19810430	0.10	128.30	178.80	
9V1	727AS	LSP	19810529	0.10	128.30	179.10	
9V1	727AS	LSP	19810702	0.10	128.30	176.80	
9V1	727AS	LSP	19810731	0.10	128.30	65.10	
9V1	727AS	LSP	19810827	0.15	128.30	71.60	
9V1	727AS	LSP	19811001	0.12	128.30	76.60	
9V1	727AS	LSP	19811029	0.15	128.30	77.80	
9V1	727AS	LSP	19811130	0.18	128.30	86.70	
9V1	727AS	LSP	19811223	0.18	128.30	91.10	
9V1	727AS	LSP	19820128	0.15	128.30	96.20	
9V1	727AS	LSP	19820224	0.15	128.30	102.00	
9V1	727AS	LSP	19820407	0.11	128.30	107.40	
9V1	727AS	LSP	19820504	0.19	128.30	108.70	
9V1	727AS	LSP	19820602	0.15	128.30	111.60	
9V1	727AS	LSP	19820630	0.10	128.30	114.00	
9V1	727AS	LSP	19820728	0.21	128.30	123.50	
9V1	727AS	LSP	19820910	0.20	128.30	130.60	
9V1	727AS	LSP	19820921	0.20	128.30	123.00	
9V1	727AS	LSP	19821105	0.19	128.30	115.70	
9V1	727AS	LSP	19821202	0.00	128.30	4.50	REDEVELOPMENT
9V1	727AS	LSP	19830103	0.00	128.30	-1.70	NEEDS REASSEMBLY
9V1	727AS	LSP	19830128	0.20	128.30	19.00	FOAMY NO MEAS
9V1	727AS	LSP	19830225	0.23	128.30	28.40	
9V1	727AS	LSP	19830330	0.52	128.30	41.10	
9V1	727AS	LSP	19830429	0.70	128.30	90.00	
9V1	727AS	LSP	19830527	0.72	128.30	110.10	
9V1	727AS	LSP	19830624	0.74	128.30	121.70	
9V1	727AS	LSP	19830722	0.75	128.30	125.30	

9V1	727AS	LSP	19830902	0.74	128.30	128.30	
9V1	727AS	LSP	19830929	0.75	128.30	144.40	
9V1	727AS	LSP	19831028	0.72	128.30	149.10	
9V1	727AS	LSP	19831208	0.71	128.30	104.50	
9V1	727AS	LSP	19840106	0.68	128.30	130.60	
9V1	727AS	LSP	19840202	0.50	128.30	132.90	
9V1	727AS	LSP	19840302	0.49	128.30	137.50	
9V1	727AS	LSP	19840328	0.50	128.30	139.80	
9V1	727AS	LSP	19840425	0.00	128.30	0.00	REDEVELOPMENT
9V1	727AS	LSP	19840523	0.50	128.30	89.90	
9V1	727AS	LSP	19840628	0.51	128.30	94.80	
9V1	727AS	LSP	19840725	0.54	128.30	95.30	
9V1	727AS	LSP	19840829	0.46	128.30	101.80	
9V1	727AS	LSP	19840926	0.48	128.30	105.30	
9V1	727AS	LSP	19841030	0.47	128.30	105.90	
9V1	727AS	LSP	19841129	0.55	128.30	117.20	
9V1	727AS	LSP	19841227	0.51	128.30	123.90	
9V1	727AS	LSP	19850130	0.51	128.30	137.50	
9V1	727AS	LSP	19850227	0.50	128.30	142.20	
9V1	727AS	LSP	19850328	0.50	128.30	106.50	
9V1	727AS	LSP	19850424	0.50	128.30	118.00	
9V1	727AS	LSP	19850530	0.44	128.30	142.10	
9V1	727AS	LSP	19850627	0.43	128.30	158.30	
9V1	727AS	LSP	19850731	0.40	128.30	172.10	
9V1	727AS	LSP	19850828	0.40	128.30	172.20	
9V1	727AS	LSP	19851001	0.00	128.30	-1.70	
9V1	727AS	LSP	19851031	0.00	128.30	-3.70	
9V1	727AS	LSP	19851205	0.40	128.30	128.30	
9V1	727AS	LSP	19860103	0.37	128.30	132.90	
9V1	727AS	LSP	19860131	0.38	128.30	146.80	
9V1	727AS	LSP	19860227	0.34	128.30	156.00	
9V1	727AS	LSP	19860402	0.38	128.30	142.20	
9V1	727AS	LSP	19860501	0.32	128.30	81.80	
9V1	727AS	LSP	19860529	0.30	128.30	116.80	
9V1	727AS	LSP	19860703	0.32	128.30	128.30	
9V1	727AS	LSP	19860801	0.36	128.30	135.20	
9V1	727AS	LSP	19860827	0.32	128.30	137.50	
9V1	727AS	LSP	19861001	0.35	128.30	132.90	
9V1	727AS	LSP	19861030	0.35	128.30	135.20	
9V1	727AS	LSP	19861125	0.33	128.30	135.20	
9V1	727AS	LSP	19861231	0.32	128.30	139.80	
9V1	727AS	LSP	19870130	0.33	128.30	144.50	
9V1	727AS	LSP	19870225	0.31	128.30	146.80	
9V1	727AS	LSP	19870401	0.40	128.30	160.60	
9V1	727AS	LSP	19870429	0.40	128.30	93.60	
9V1	727AS	LSP	19870528	0.37	128.30	107.30	
9V1	727AS	LSP	19870702	0.35	128.30	112.50	

9V1	727AS	LSP	19870730	0.35	128.30	114.80	
9V1	727AS	LSP	19870828	0.35	128.30	119.10	
9V1	727AS	LSP	19870930	0.35	128.30	120.40	
9V1	727AS	LSP	19871029	0.33	128.30	116.30	
9V1	727AS	LSP	19871125	0.32	128.30	122.40	
9V1	727AS	LSP	19871230	0.31	128.30	132.90	
9V1	727AS	LSP	19880127	0.31	128.30	139.80	
9V1	727AS	LSP	19880224	0.29	128.30	142.20	
9V1	727AS	LSP	19880329	0.30	128.30	149.10	
9V1	727AS	LSP	19880427	0.00	128.30	6.20	REDEVELOPMENT
9V1	727AS	LSP	19880525	0.32	128.30	99.10	
9V1	727AS	LSP	19880629	0.30	128.30	109.30	
9V1	727AS	LSP	19880727	0.32	128.30	113.30	
9V1	727AS	LSP	19880831	0.31	128.30	113.20	
9V1	727AS	LSP	19880929	0.31	128.30	109.30	
9V1	727AS	LSP	19881026	0.32	128.30	110.90	
9V1	727AS	LSP	19881130	0.30	128.30	120.00	
9V1	727AS	LSP	19881229	0.29	128.30	137.50	
9V1	727AS	LSP	19890126	0.29	128.30	135.20	
9V1	727AS	LSP	19890223	0.28	128.30	144.40	
9V1	727AS	LSP	19890329	0.29	128.30	144.40	
9V1	727AS	LSP	19890504	0.28	128.30	146.80	
9V1	727AS	LSP	19890602	0.28	128.30	149.10	
9V1	727AS	LSP	19890629	0.25	128.30	151.40	
9V1	727AS	LSP	19890802	0.30	128.30	139.80	
9V1	727AS	LSP	19890830	0.30	128.30	128.30	
9V1	727AS	LSP	19890928	0.30	128.30	128.30	
9V1	727AS	LSP	19891102	0.30	128.30	133.30	
9V1	727AS	LSP	19891129	0.30	128.30	142.20	
9V1	727AS	LSP	19900104	0.29	128.30	146.80	
9V1	727AS	LSP	19900131	0.29	128.30	151.80	
9V1	727AS	LSP	19900228	0.27	128.30	156.40	
9V1	727AS	LSP	19900405	0.28	128.30	160.60	
9V1	727AS	LSP	19900503	0.25	128.30	158.30	
9V1	727AS	LSP	19900601	0.28	128.30	142.20	
9V1	727AS	LSP	19900705	0.25	128.30	158.30	
9V1	727AS	LSP	19900801	0.25	128.30	153.70	
9V1	727AS	LSP	19900830	0.29	128.30	151.30	
9V1	727AS	LSP	19901003	0.30	128.30	144.40	
9V1	727AS	LSP	19901031	0.29	128.30	151.40	
9V1	727AS	LSP	19901205	0.26	128.30	156.00	
9V1	727AS	LSP	19901228	0.26	128.30	156.00	
9V1	727AS	LSP	19910130	0.25	128.30	167.50	
9V1	727AS	LSP	19910227	0.25	128.30	75.50	
9V1	727AS	LSP	19910403	0.23	128.30	95.30	
9V1	727AS	LSP	19910502	0.25	128.30	84.30	
9V1	727AS	LSP	19910612	0.00	128.30	5.90	*

9V1	727AS	LSP	19910714	0.00	128.30	-2.10	MEASURED 910717
9V1	727AS	LSP	19910807	0.00	128.30	-3.20	OFF FOR CONSTR.
9V1	727AS	LSP	19910906	0.20	128.30	75.50	
9V1	727AS	LSP	19911003	0.18	128.30	76.30	
9V1	727AS	LSP	19911031	0.20	128.30	79.80	
9V1	727AS	LSP	19911127	0.20	128.30	84.30	
9V1	727AS	LSP	19911227	0.20	128.30	91.10	
9V1	727AS	LSP	19920129	0.20	128.30	104.30	
9V1	727AS	LSP	19920227	0.20	128.30	111.20	
9V1	727AS	LSP	19920409	0.22	128.30	80.30	
9V1	727AS	LSP	19920429	0.20	128.30	83.80	
9V1	727AS	LSP	19920604	0.20	128.30	86.60	
9V1	727AS	LSP	19920702	0.20	128.30	81.20	
9V1	727AS	LSP	19920805	0.20	128.30	79.30	
9V1	727AS	LSP	19920903	0.15	128.30	81.30	
9V1	727AS	LSP	19921002	0.19	128.30	85.30	
9V1	727AS	LSP	19921028	0.18	128.30	78.70	
9V1	727AS	LSP	19921203	0.20	128.30	85.40	
9V1	727AS	LSP	19921217	0.20	128.30	97.60	
9V1	727AS	LSP	19930128	0.15	128.30	103.50	
9V1	727AS	LSP	19930224	0.00	128.30	-8.70	
9V1	727AS	LSP	19930331	0.10	128.30	85.10	
9V1	727AS	LSP	19930428	0.15	128.30	91.60	
9V1	727AS	LSP	19930603	0.15	128.30	96.00	
9V1	727AS	LSP	19930630	0.24	128.30	107.80	
9V1	727AS	LSP	19930728	0.25	128.30	103.90	
9V1	727AS	LSP	19930826	0.25	128.30	107.50	
9V1	727AS	LSP	19931001	0.29	128.30	108.30	
9V1	727AS	LSP	19931027	0.29	128.30	112.10	
9V1	727AS	LSP	19931124	0.30	128.30	117.30	
9V1	727AS	LSP	19931227	0.26	128.30	128.30	
9V1	727AS	LSP	19940127	0.29	128.30	128.30	
9V1	727AS	LSP	19940302	0.29	128.30	130.60	
9V1	727AS	LSP	19940323	0.29	128.30	128.30	
9V1	727AS	LSP	19940423	0.00	128.30	-0.70	OFF
9V1	727AS	LSP	19940523	0.00	128.30	-0.70	OFF
9V1	727AS	LSP	19940706	0.30	128.30	127.30	
9V1	727AS	LSP	19940803	0.30	128.30	122.80	
9V1	727AS	LSP	19940902	0.31	128.30	124.10	
9V1	727AS	LSP	19940929	0.30	128.30	130.60	
9V1	727AS	LSP	19941027	0.30	128.30	130.60	
9V1	727AS	LSP	19941130	0.30	128.30	135.20	
9V1	727AS	LSP	19941229	0.30	128.30	146.70	
9V1	727AS	LSP	19950120	0.00	128.30	8.00	
9V1	727AS	LSP	19950320	0.00	128.30	8.00	
9V1	727AS	LSP	19950426	0.29	128.30	143.40	
9V1	727AS	LSP	19950601	0.29	128.30	138.80	



9V1	727AS	LSP	19950628	0.25	128.30	134.50	
9V1	727AS	LSP	19950726	0.29	128.30	141.10	
9V1	727AS	LSP	19950901	0.29	128.30	148.00	
9V1	727AS	LSP	19950920	0.29	128.30	135.20	
9V1	727AS	LSP	19951101	0.29	128.30	137.50	
9V1	727AS	LSP	19951213	0.00	128.30	0.00	NO WS EL
9V1	727AS	LSP	19951228	0.15	128.30	100.30	
9V1	727AS	LSP	19960105	0.15	128.30	87.30	
9V1	727AS	LSP	19960110	0.18	128.30	111.10	
9V1	727AS	LSP	19960118	0.19	128.30	117.30	
9V1	727AS	LSP	19960123	0.19	128.30	119.20	
9V1	727AS	LSP	19960201	0.15	128.30	120.30	
9V1	727AS	LSP	19960208	0.15	128.30	125.70	
9V1	727AS	LSP	19960214	0.15	128.30	128.30	
9V1	727AS	LSP	19960228	0.15	128.30	132.90	
9V1	727AS	LSP	19960307	0.15	128.30	143.40	
9V1	727AS	LSP	19960319	0.20	128.30	167.50	
9V1	727AS	LSP	19960326	0.20	128.30	146.70	
9V1	727AS	LSP	19960403	0.20	128.30	153.60	
9V1	727AS	LSP	19960410	0.15	128.30	153.60	
9V1	727AS	LSP	19960416	0.20	128.30	155.90	
9V1	727AS	LSP	19960423	0.20	128.30	144.40	
9V1	727AS	LSP	19960501	0.20	128.30	149.00	
9V1	727AS	LSP	19960509	0.20	128.30	151.30	
9V1	727AS	LSP	19960514	0.19	128.30	151.30	
9V1	727AS	LSP	19960523	0.20	128.30	149.00	
9V1	727AS	LSP	19960530	0.19	128.30	128.30	
9V1	727AS	LSP	19960603	0.19	128.30	151.30	
9V1	727AS	LSP	19960610	0.19	128.30	156.00	
9V1	727AS	LSP	19960617	0.19	128.30	156.00	
9V1	727AS	LSP	19960624	0.18	128.30	156.00	
9V1	727AS	LSP	19960731	0.19	128.30	156.00	
9V1	727AS	LSP	19960807	0.19	128.30	156.00	
9V1	727AS	LSP	19960814	0.00	128.30	43.30	
9V1	727AS	LSP	19960829	0.20	128.30	129.30	
9V1	727AS	LSP	19960910	0.19	128.30	129.30	
9V1	727AS	LSP	19960917	0.10	128.30	127.30	
9V1	727AS	LSP	19960919	0.00	128.30	8.00	
9V1	727AS	LSP	19960924	0.00	128.30	8.00	
9V1	727AS	LSP	19960927	0.10	128.30	15.00	Well On
9V1	727AS	LSP	19961010	0.10	128.30	92.30	
9V1	727AS	LSP	19961016	0.10	128.30	99.30	
9V1	727AS	LSP	19961023	0.12	128.30	97.30	
9V1	727AS	LSP	19961107	0.14	128.30	100.30	
9V1	727AS	LSP	19961120	0.15	128.30	111.90	
9V1	727AS	LSP	19961204	0.20	128.30	118.20	
9V1	727AS	LSP	19961220	0.20	128.30	125.30	

9V1	727AS	LSP	19970107	0.20	128.30	130.60	
9V1	727AS	LSP	19970131	0.20	128.30	135.20	
9V1	727AS	LSP	19970205	0.20	128.30	135.20	W.B. Acid inj.
9V1	727AS	LSP	19970213	0.15	128.30	54.30	W.B. Acid inj.
9V1	727AS	LSP	19970220	0.15	128.30	45.30	W.B. Acid inj.
9V1	727AS	LSP	19970227	0.30	128.30	92.30	Q=.15/.30cfs Aci
9V1	727AS	LSP	19970306	0.30	128.30	103.30	
9V1	727AS	LSP	19970318	0.31	128.30	113.40	
9V1	727AS	LSP	19970325	0.31	128.30	114.30	
9V1	727AS	LSP	19970402	0.31	128.30	115.30	W.B. Acid inj.
9V1	727AS	LSP	19970417	0.31	128.30	117.30	W.B. Acid inj.
9V1	727AS	LSP	19970423	0.31	128.30	116.30	W.B. Acid inj.
9V1	727AS	LSP	19970429	0.31	128.30	119.30	W.B. Acid inj.
9V1	727AS	LSP	19970515	0.31	128.30	109.30	W.B. Acid inj.
9V1	727AS	LSP	19970604	0.31	128.30	108.30	W.B. Acid inj.
9V1	727AS	LSP	19970610	0.31	128.30	121.30	W.B. Acid inj.
9V1	727AS	LSP	19970618	0.31	128.30	121.30	W.B. Acid inj.
9V1	727AS	LSP	19970626	0.28	128.30	112.30	W.B. Acid inj.
9V1	727AS	LSP	19970707	0.28	128.30	109.30	W.B. Acid inj.
9V1	727AS	LSP	19970717	0.28	128.30	116.30	W.B. Acid inj.
9V1	727AS	LSP	19970722	0.28	128.30	119.30	W.B. Acid inj.
9V1	727AS	LSP	19970813	0.29	128.30	120.30	W.B. Acid inj.
9V1	727AS	LSP	19970904	0.29	128.30	118.30	W.B. Acid inj.
9V1	727AS	LSP	19970912	0.28	128.30	121.30	W.B. Acid inj.
9V1	727AS	LSP	19970922	0.28	128.30	120.30	W.B. Acid inj.
9V1	727AS	LSP	19971002	0.28	128.30	119.30	W.B. Acid inj.
9V1	727AS	LSP	19971009	0.28	128.30	118.30	W.B. Acid inj.
9V1	727AS	LSP	19971022	0.23	128.30	120.30	W.B. Acid inj.
9V1	727AS	LSP	19971030	0.23	128.30	132.90	W.B. Acid inj.
9V1	727AS	LSP	19971105	0.24	128.30	135.20	W.B. Acid inj.
9V1	727AS	LSP	19971120	0.24	128.30	135.20	W.B. Acid inj.
9V1	727AS	LSP	19971203	0.24	128.30	142.10	W.B. Acid inj.
9V1	727AS	LSP	19971210	0.24	128.30	130.60	W.B. Acid inj.
9V1	727AS	LSP	19971231	0.24	128.30	139.80	W.B. Acid inj.
9V1	727AS	LSP	19980108	0.22	128.30	144.50	W.B. Acid inj.
9V1	727AS	LSP	19980116	0.22	128.30	144.50	W.B. Acid inj.
9V1	727AS	LSP	19980121	0.22	128.30	146.80	W.B. Acid inj.
9V1	727AS	LSP	19980128	0.23	128.30	146.80	W.B. Acid inj.
9V1	727AS	LSP	19980213	0.23	128.30	144.50	W.B. Acid inj.
9V1	727AS	LSP	19980226	0.23	128.30	144.50	W.B. Acid inj.
9V1	727AS	LSP	19980304	0.23	128.30	144.50	W.B. Acid inj.
9V1	727AS	LSP	19980319	0.30	128.30	151.40	psi=13\10-03/19
9V1	727AS	LSP	19980331	0.29	128.30	151.40	
9V1	727AS	LSP	19980407	0.29	128.30	142.10	
9V1	727AS	LSP	19980414	0.29	128.30	142.10	to be repaired
9V1	727AS	LSP	19980430	0.29	128.30	139.84	to be repaired
9V1	727AS	LSP	19980505	0.28	128.30	139.84	line broken

9V1	727AS	LSP	19980520	0.28	128.30	139.84	line broken
9V1	727AS	LSP	19980526	0.27	128.30	139.84	line broken
9V1	727AS	LSP	19980608	0.27	128.30	139.84	line broken
9V1	727AS	LSP	19980615	0.26	128.30	128.30	line broken
9V1	727AS	LSP	19980622	0.27	128.30	128.30	line broken
9V1	727AS	LSP	19980624	0.25	128.30	149.07	back cal'd wse ws
9V1	727AS	LSP	19980706	0.24	128.30	155.99	
9V1	727AS	LSP	19980716	0.20	128.30	155.99	
9V1	727AS	LSP	19980723	0.20	128.30	151.38	
9V1	727AS	LSP	19980730	0.18	128.30	155.99	
9V1	727AS	LSP	19980805	0.19	128.30	155.99	
9V1	727AS	LSP	19980817	0.20	128.30	151.38	
9V1	727AS	LSP	19980915	0.18	128.30	153.68	
9V1	727AS	LSP	19980928	0.20	128.30	149.07	
9V1	727AS	LSP	19981005	0.20	128.30	151.38	
9V1	727AS	LSP	19981009	0.20	128.30	151.38	
9V1	727AS	LSP	19981015	0.19	128.30	155.99	
9V1	727AS	LSP	19981022	0.19	128.30	153.68	
9V1	727AS	LSP	19981029	0.18	128.30	155.99	
9V1	727AS	LSP	19981105	0.18	128.30	153.68	
9V1	727AS	LSP	19981119	0.16	128.30	155.99	
9V1	727AS	LSP	19981125	0.16	128.30	155.99	
9V1	727AS	LSP	19981203	0.15	128.30	153.68	
9V1	727AS	LSP	19981210	0.17	128.30	151.38	
9V1	727AS	LSP	19981217	0.17	128.30	151.38	
9V1	727AS	LSP	19981224	0.22	128.30	151.38	
9V1	727AS	LSP	19981229	0.26	128.30	151.38	
9V1	727AS	LSP	19990104	0.14	128.30	151.38	
9V1	727AS	LSP	19990111	0.14	128.30	151.38	
9V1	727AS	LSP	19990125	0.15	128.30	151.38	
9V1	727AS	LSP	19990222	0.14	128.30	151.38	
9V1	727AS	LSP	19990308	0.16	128.30	151.38	
9V1	727AS	LSP	19990316	0.19	128.30	151.38	
9V1	727AS	LSP	19990329	0.20	128.30	146.76	
9V1	727AS	LSP	19990412	0.20	128.30	151.38	
9V1	727AS	LSP	19990504	0.20	128.30	151.38	
9V1	727AS	LSP	19990607	0.26	128.30	138.30	
9V1	727AS	LSP	19990614	0.22	128.30	151.38	
9V1	727AS	LSP	19990722	0.24	128.30	151.38	
9V1	727AS	LSP	19990810	0.22	128.30	162.92	
9V1	727AS	LSP	19990817	0.20	128.30	155.99	
9V1	727AS	LSP	19990908	0.20	128.30	155.99	
9V1	727AS	LSP	19990913	0.20	128.30	155.99	
9V1	727AS	LSP	19991021	0.00	128.30	2.30	So. Ca line H2O leak
9V1	727AS	LSP	19991025	0.20	128.30	2.30	
9V1	727AS	LSP	19991104	0.17	128.30	98.30	
9V1	727AS	LSP	19991122	0.18	128.30	93.30	

9V1	727AS	LSP	19991206	0.16	128.30	97.30	
9V1	727AS	LSP	19991213	0.18	128.30	104.30	
9V1	727AS	LSP	19991220	0.17	128.30	118.30	
9V1	727AS	LSP	19991227	0.17	128.30	92.80	
9V1	727AS	LSP	20000203	0.00	128.30	9.40	
9V1	727AS	LSP	20000301	0.16	128.30	109.30	
9V1	727AS	LSP	20000313	0.17	128.30	98.30	
9V1	727AS	LSP	20000424	0.00	128.30	3.90	
9V1	727AS	LSP	20000508	0.00	128.30	4.00	
9V1	727AS	LSP	20000614	0.15	128.30	3.10	Raised Q from 0.0
9V1	727AS	LSP	20000629	0.14	128.30	50.50	Raised Q from 0.0
9V1	727AS	LSP	20000711	0.15	128.30	52.30	Raised Q from 0.0
9V1	727AS	LSP	20000725	0.30	128.30	58.20	Q=0.14/0.30
9V1	727AS	LSP	20000811	0.30	128.30	94.40	
9V1	727AS	LSP	20000830	0.30	128.30	104.30	
9V1	727AS	LSP	20000918	0.30	128.30	102.80	
9V1	727AS	LSP	20001006	0.28	128.30	105.80	
9V1	727AS	LSP	20001025	0.28	128.30	114.10	
9V1	727AS	LSP	20001108	0.28	128.30	116.40	
9V1	727AS	LSP	20001211	0.27	128.30	130.61	
9V1	727AS	LSP	20001214	0.26	128.30	130.61	
9V1	727AS	LSP	20010118	0.25	128.30	128.30	
9V1	727AS	LSP	20010125	0.26	128.30	128.30	
9V1	727AS	LSP	20010215	0.30	128.30	108.30	
9V1	727AS	LSP	20010308	0.29	128.30	112.90	
9V1	727AS	LSP	20010314	0.38	128.30	119.30	
9V1	727AS	LSP	20010321	0.28	128.30	118.60	
9V1	727AS	LSP	20010404	0.27	128.30	124.30	
9V1	727AS	LSP	20010411	0.27	128.30	122.30	
9V1	727AS	LSP	20010419	0.26	128.30	125.30	
9V1	727AS	LSP	20010503	0.26	128.30	126.80	
9V1	727AS	LSP	20010510	0.27	128.30	113.30	FLOODED
9V1	727AS	LSP	20010518	0.26	128.30	126.50	0
9V1	727AS	LSP	20010531	0.28	128.30	113.30	FLOODED
9V1	727AS	LSP	20010606	0.28	128.30	111.00	
9V1	727AS	LSP	20010613	0.28	128.30	108.80	
9V1	727AS	LSP	20010705	0.28	128.30	120.50	
9V1	727AS	LSP	20010726	0.28	128.30	117.10	
9V1	727AS	LSP	20010810	0.28	128.30	125.00	
9V1	727AS	LSP	20010926	0.26	128.30	115.61	
9V1	727AS	LSP	20011011	0.26	128.30	115.61	
9V1	727AS	LSP	20011023	0.26	128.30	134.07	0
9V1	727AS	LSP	20011031	0.24	128.30	131.76	0
9V1	727AS	LSP	20011107	0.29	128.30	131.76	
9V1	727AS	LSP	20011204	0.24	128.30	145.61	
9V1	727AS	LSP	20011210	0.24	128.30	145.61	
9V1	727AS	LSP	20011220	0.23	128.30	145.61	

9V1	727AS	LSP	20020115	0.26	128.30	136.38	
9V1	727AS	LSP	20020204	0.24	128.30	131.76	
9V1	727AS	LSP	20020221	0.24	128.30	109.90	
9V1	727AS	LSP	20020227	0.26	128.30	114.50	
9V1	727AS	LSP	20020307	0.25	128.30	112.20	
9V1	727AS	LSP	20020314	0.26	128.30	112.20	
9V1	727AS	LSP	20020404	0.25	128.30	109.90	
9V1	727AS	LSP	20020425	0.26	128.30	109.90	
9V1	727AS	LSP	20020508	0.26	128.30	114.50	
9V1	727AS	LSP	20020522	0.24	128.30	114.50	
9V1	727AS	LSP	20020606	0.24	128.30	114.50	
9V1	727AS	LSP	20020612	0.24	128.30	119.10	
9V1	727AS	LSP	20020711	0.25	128.30	119.10	
9V1	727AS	LSP	20020726	0.25	128.30	116.80	
9V1	727AS	LSP	20020826	0.26	128.30	116.80	
9V1	727AS	LSP	20020905	0.24	128.30	116.80	
9V1	727AS	LSP	20020920	0.24	128.30	115.20	
9V1	727AS	LSP	20021004	0.24	128.30	123.60	
9V1	727AS	LSP	20021018	0.24	128.30	123.70	
9V1	727AS	LSP	20021104	0.24	128.30	123.70	
9V1	727AS	LSP	20021126	0.24	128.30	121.40	
9V1	727AS	LSP	20021207	0.24	128.30	121.40	
9V1	727AS	LSP	20030108	0.24	128.30	114.50	
9V1	727AS	LSP	20030124	0.24	128.30	123.70	
9V1	727AS	LSP	20030210	0.23	128.30	123.70	
9V1	727AS	LSP	20030220	0.24	128.30	124.10	
9V1	727AS	LSP	20030318	0.26	128.30	0.00	OFF
9V1	727AS	LSP	20030325	0.00	128.30	0.00	OFF
9V1	727AS	LSP	20030507	0.26	128.30	131.20	
9V1	727AS	LSP	20030521	0.26	128.30	131.20	
9V1	727AS	LSP	20030609	0.26	128.30	131.20	
9V1	727AS	LSP	20030624	0.26	128.30	131.20	
9V1	727AS	LSP	20030710	0.26	128.30	111.20	
9V1	727AS	LSP	20030904	0.25	128.30	111.20	0
9V1	727AS	LSP	20031010	0.28	128.30	111.20	
9V1	727AS	LSP	20031106	0.25	128.30	101.20	
9V1	727AS	LSP	20031211	0.25	128.30	101.20	
9V1	727AS	LSP	20031229	0.30	128.30	101.20	
9V1	727AS	LSP	20040114	0.30	128.30	101.20	
9V1	727AS	LSP	20040203	0.28	128.30	101.20	
9V1	727AS	LSP	20040211	0.28	128.30	101.20	
9V1	727AS	LSP	20040305	0.27	128.30	101.20	
9V1	727AS	LSP	20040401	0.28	128.30	101.20	
9V1	727AS	LSP	20040415	0.28	128.30	101.20	
9V1	727AS	LSP	20040513	0.27	128.30	101.20	
9V1	727AS	LSP	20040607	0.28	128.30	101.20	
9V1	727AS	LSP	20040701	0.28	128.30	91.20	

9V1	727AS	LSP	20040708	0.28	128.30	91.20	
9V1	727AS	LSP	20040715	0.28	128.30	91.20	
9V1	727AS	LSP	20040812	0.00	128.30	0.00	REDEVELOPING
9V1	727AS	LSP	20040824	0.00	128.30	0.00	OFF 8-23-04
9V1	727AS	LSP	20040903	0.00	128.30	1.20	OFF 8-23-04
9V1	727AS	LSP	20040929	0.20	128.30	41.20	0
9V1	727AS	LSP	20041006	0.20	128.30	41.20	
9V1	727AS	LSP	20041104	0.19	128.30	41.20	
9V1	727AS	LSP	20041222	0.18	128.30	41.20	
9V1	727AS	LSP	20050414	0.26	128.30	41.20	
9V1	727AS	LSP	20050421	0.25	128.30	41.20	
9V1	727AS	LSP	20050504	0.22	128.30	61.20	0
9V1	727AS	LSP	20050526	0.22	128.30	61.20	
9V1	727AS	LSP	20050609	0.24	128.30	61.20	
9V1	727AS	LSP	20050616	0.22	128.30	81.20	
9V1	727AS	LSP	20050627	0.22	128.30	81.20	
9V1	727AS	LSP	20050728	0.22	128.30	81.20	
9V1	727AS	LSP	20050804	0.22	128.30	81.20	
9V1	727AS	LSP	20050817	0.24	128.30	81.20	
9V1	727AS	LSP	20050824	0.24	128.30	81.20	
9V1	727AS	LSP	20050906	0.24	128.30	81.20	
9V1	727AS	LSP	20050919	0.24	128.30	81.20	
9V1	727AS	LSP	20051031	0.22	128.30	71.20	
9V1	727AS	LSP	20051117	0.20	128.30	71.20	
9V1	727AS	LSP	20051201	0.21	128.30	71.20	
9V1	727AS	LSP	20060106	0.20	128.30	71.20	
9V1	727AS	LSP	20060118	0.22	128.30	71.20	
9V1	727AS	LSP	20060302	0.20	128.30	71.20	
9V1	727AS	LSP	20060425	0.20	128.30	81.20	
9V1	727AS	LSP	20060508	0.20	128.30	81.20	
9V1	727AS	LSP	20060802	0.20	128.30	55.20	
9V1	727AS	LSP	20060814	0.16	128.30	55.20	
9V1	727AS	LSP	20060907	0.24	128.30	66.20	
9V1	727AS	LSP	20061012	0.22	128.30	63.20	
9V1	727AS	LSP	20061019	0.12	128.30	77.20	
9V1	727AS	LSP	20061206	0.14	128.30	73.20	
9V1	727AS	LSP	20061226	0.14	128.30	73.20	
9V1	727AS	LSP	20070104	0.16	128.30	76.20	
9V1	727AS	LSP	20070110	0.16	128.30	75.20	
9V1	727AS	LSP	20070131	0.16	128.30	75.20	
9V1	727AS	LSP	20070208	0.16	128.30	75.20	
9V1	727AS	LSP	20070215	0.16	128.30	75.20	
9V1	727AS	LSP	20070228	0.16	128.30	75.20	
9V1	727AS	LSP	20070314	0.16	128.30	75.20	
9V1	727AS	LSP	20070319	0.10	128.30	62.20	
9V1	727AS	LSP	20070502	0.20	128.30	109.20	
9V1	727AS	LSP	20070511	0.20	128.30	109.20	

9V1	727AS	LSP	20070516	0.20	128.30	109.20
9V1	727AS	LSP	20070606	0.16	128.30	124.20
9V1	727AS	LSP	20070613	0.16	128.30	124.20
9V1	727AS	LSP	20070627	0.16	128.30	124.20
9V1	727AS	LSP	20070706	0.18	128.30	122.20
9V1	727AS	LSP	20070711	0.18	128.30	122.20
9V1	727AS	LSP	20070726	0.18	128.30	122.20
9V1	727AS	LSP	20070801	0.18	128.30	122.20
9V1	727AS	LSP	20070816	0.18	128.30	124.20
9V1	727AS	LSP	20070822	0.18	128.30	124.20
9V1	727AS	LSP	20070913	0.18	128.30	124.20
9V1	727AS	LSP	20070919	0.18	128.30	124.20
9V1	727AS	LSP	20070926	0.18	128.30	124.20
9V1	727AS	LSP	20071015	0.18	128.30	124.20
9V1	727AS	LSP	20071018	0.18	128.30	124.20
9V1	727AS	LSP	20071022	0.18	128.30	124.20
9V1	727AS	LSP	20071031	0.18	128.30	124.20
9V1	727AS	LSP	20071105	0.18	128.30	124.20
9V1	727AS	LSP	20071113	0.18	128.30	124.20
9V1	727AS	LSP	20071203	0.18	128.30	124.20
9V1	727AS	LSP	20071206	0.18	128.30	124.20
9V1	727AS	LSP	20071212	0.18	128.30	124.20
9V1	727AS	LSP	20071221	0.18	128.30	124.20
9V1	727AS	LSP	20080108	0.18	128.30	124.20
9V1	727AS	LSP	20080116	0.18	128.30	124.20
9V1	727AS	LSP	20080123	0.18	128.30	124.20
9V1	727AS	LSP	20080131	0.19	128.30	138.10
9V1	727AS	LSP	20080206	0.19	128.30	138.10
9V1	727AS	LSP	20080213	0.19	128.30	138.10
9V1	727AS	LSP	20080221	0.19	128.30	138.10
9V1	727AS	LSP	20080227	0.16	128.30	140.40
9V1	727AS	LSP	20080312	0.18	128.30	135.80
9V1	727AS	LSP	20080402	0.18	128.30	135.80
9V1	727AS	LSP	20080408	0.20	128.30	135.80
9V1	727AS	LSP	20080416	0.20	128.30	135.80
9V1	727AS	LSP	20080430	0.18	128.30	154.28
9V1	727AS	LSP	20080514	0.20	128.30	110.50
9V1	727AS	LSP	20080521	0.20	128.30	110.50
9V1	727AS	LSP	20080630	0.19	128.30	152.00
9V1	727AS	LSP	20080714	0.19	128.30	152.00
9V1	727AS	LSP	20080717	0.20	128.30	151.90
9V1	727AS	LSP	20080723	0.20	128.30	140.40
9V1	727AS	LSP	20080812	0.20	128.30	142.70
9V1	727AS	LSP	20081103	0.18	128.30	133.50
9V1	727AS	LSP	20081210	0.15	128.30	147.35
9V1	727AS	LSP	20081219	0.14	128.30	145.00
9V1	727AS	LSP	20090107	0.16	128.30	168.10

9V1	727AS	LSP	20090114	0.16	128.30	168.10	
9V1	727AS	LSP	20090130	0.00	128.30	168.10	Contractors on well
9V1	727AS	LSP	20090203	0.00	128.30		Contractor is on well.
9V1	727AS	LSP	20090212	0.10	128.30	135.80	
9V1	727AS	LSP	20090226	0.12	128.30	135.80	
9V1	727AS	LSP	20090312	0.11	128.30	133.50	
9V1	727AS	LSP	20090318	0.10	128.30	133.50	
9V1	727AS	LSP	20090325	0.15	128.30	133.51	
9V1	727AS	LSP	20090401	0.15	128.30	135.82	
9V1	727AS	LSP	20090408	0.15	128.30	64.20	
9V1	727AS	LSP	20090416	0.22	128.30	62.20	
9V1	727AS	LSP	20090604	0.20	128.30	66.20	
9V1	727AS	LSP	20090611	0.20	128.30	68.20	
9V1	727AS	LSP	20090701	0.25	128.30	82.20	
9V1	727AS	LSP	20090716	0.20	128.30	73.20	
9V1	727AS	LSP	20090722	0.22	128.30	74.20	
9V1	727AS	LSP	20090812	0.24	128.30	75.20	
9V1	727AS	LSP	20090826	0.22	128.30	73.20	
9V1	727AS	LSP	20090917	0.30	128.30	107.20	
9V1	727AS	LSP	20090925	0.30	128.30	107.20	
9V1	727AS	LSP	20091029	0.30	128.30	108.20	
9V1	727AS	LSP	20091202	0.30	128.30	107.20	
9V1	727AS	LSP	20091223	0.30	128.30	95.20	Qvalve .50 doesn't retained
9V1	727AS	LSP	20100211	0.30	128.30	99.20	
9V1	727AS	LSP	20100218	0.30	128.30	101.20	
9V1	727AS	LSP	20100317	0.30	128.30	117.20	
9V1	727AS	LSP	20100422	0.30	128.30	123.20	
9V1	727AS	LSP	20100526	0.30	128.30	133.51	
9V1	727AS	LSP	20100616	0.30	128.30	133.51	
9V1	727AS	LSP	20100719	0.30	128.30	133.51	
9V1	727AS	LSP	20100812	0.30	128.30	106.20	
9V1	727AS	LSP	20100915	0.35	128.30	101.20	
9V1	727AS	LSP	20101021	0.40	128.30	104.20	
9V1	727AS	LSP	20101123	0.45	128.30	109.20	
9V1	727AS	LSP	20110106	0.45	128.30	106.20	
9V1	727AS	LSP	20110202	0.50	128.30	127.20	
9V1	727AS	LSP	20110317	0.10	128.30	67.20	
9V1	727AS	LSP	20110418	0.30	128.30	96.20	
9V1	727AS	LSP	20110518	0.30	128.30	88.20	
9V1	727AS	LSP	20110707	0.30	128.30	98.20	
9V1	727AS	LSP	20110726	0.35	128.30	95.20	
9V1	727AS	LSP	20110825	0.10	128.30	36.20	
9V1	727AS	LSP	20110928	0.13	128.30	78.20	
9V1	727AS	LSP	20111018	0.25	128.30	94.20	
9V1	727AS	LSP	20111130	0.25	128.30	109.20	Q at arrival 0.49
9V1	727AS	LSP	20111227	0.30	128.30	90.20	
9V1	727AS	LSP	20120206	0.35	128.30	97.20	



9V1	727AS	LSP	20120314	0.40	128.30	113.20	
9V1	727AS	LSP	20120404	0.40	128.30	113.20	
9V1	727AS	LSP	20120424	0.40	128.30		Q at arrival 0.22. 2 inch of
9V1	727AS	LSP	20120620	0.25	128.30		leaks at higher Q. probe in
9V1	727AS	LSP	20120822	0.25	128.30		leaks at higher Q. probe in
9V1	727AS	LSP	20121011		128.30		Clogged polyflow. Leaks at
9V1	727AS	LSP	20121129	0.30	128.30		Q at arrival 0.19. Leaks at
9V1	727AS	LSP	20130129	0.35	128.30		
9V1	727AS	LSP	20130325	0.30	128.30		
9V1	727AS	LSP	20130430	0.30	128.30		
9V1	727AS	LSP	20130605	0.30	128.30		
9V1	727AS	LSP	20130717	0.30	128.30		Q was .39cfs at arrival
9V1	727AS	LSP	20130828	0.30	128.30		
9V1	727AS	LSP	20131003	0.30	128.30	113.20	W.S. per telemetry.
9V1	727AS	LSP	20131107	0.35	128.30	127.20	
9V1	727AS	LSP	20131210	0.40	128.30	143.60	W.S. per telemetry. Meas'
9V1	727AS	LSP	20140313	0.45	128.30	128.70	W.S. per telemetry

# Analysis of the Energy Intensity of Water Supplies for West Basin Municipal Water District

March, 2007

Robert C. Wilkinson, Ph.D.

### Energy Intensity of Water Supplies for West Basin Municipal Water District

	af/yr	Percentage of Total Source Type	kWh/af Conveyance Pumping	kWh/af MWD Treatment	kWh/af Recycled Treatment	kWh/af Groundwater Pumping	kWh/af Groundwater Treatment	kWh/af Desalination	kWh/af WBMWD Distribution	Total kWh/af	Total kWh/year
<b>Imported Deliveries</b>											
State Water Project (SWP) <sup>1</sup>	57,559	43%	3,000	44	NA	NA	NA	NA	0	3,044	175,209,596
Colorado River Aqueduct (CRA) <sup>1</sup> (other than replenishment water)	76,300	57%	2,000	44	NA	NA	NA	NA	0	2,044	155,957,200
<b>Groundwater<sup>2</sup></b>											
natural recharge	19,720	40%	NA	NA	NA	350	0	NA	0	350	6,902,030
replenished with (injected) SWP water <sup>1</sup>	9,367	19%	3,000	44	NA	350	0	NA	0	3,394	31,791,598
replenished with (injected) CRA water <sup>1</sup>	11,831	24%	2,000	44	NA	350	0	NA	0	2,394	28,323,432
replenished with (injected) recycled water	8,381	17%	205	0	790	350	0	NA	220	1,565	13,116,278
<b>Recycled Water</b>											
West Basin Treatment, Title 22	21,506	60%	205	NA	0	NA	NA	NA	285	490	10,537,940
West Basin Treatment, RO	14,337	40%	205	NA	790	NA	NA	NA	285	1,280	18,351,360
<b>Ocean Desalination</b>	20,000	100%	200	NA	NA	NA	NA	3,027	460	3,687	82,588,800

Notes:

NA Not applicable

<sup>1</sup> Imported water based on percentage of CRA and SWP water MWD received, averaged over an 11-year period. Note that the figures for imports do not include an accounting for system losses due to evaporation and other factors. These losses clearly exist, and an estimate of 5% or more may be reasonable. The figures for imports above should therefore be understood to be conservative (that is, the actual energy intensity is in fact higher for imported supplies than indicated by the figures).

<sup>2</sup> Groundwater values include entire basin, West Basin service area covers approximately 86% of the basin. Groundwater values are specific to aquifer characteristics, including depth, within the basin.



# California Climate Action Registry General Reporting Protocol

Reporting Entity-Wide Greenhouse Gas Emissions

Version 3.1 | January 2009



Thus, regional/power pool emission factors for electricity consumption can be used to determine emissions based on electricity consumed. If you can obtain verified emission factors specific to the supplier of your electricity, you are encouraged to use those factors in calculating your indirect emissions from electricity generation. If your electricity provider reports an electricity delivery metric under the California Registry's Power/Utility Protocol, you may use this factor to determine your emissions, as it is more accurate than the default regional factor. Utility-specific emission factors are available in the Members-Only section of the California Registry website and through your utility's Power/Utility Protocol report in CARROT.

This Protocol provides power pool-based carbon dioxide, methane, and nitrous oxide emission factors from the U.S. EPA's eGRID database (see Figure III.6.1), which are provided in Appendix C, Table C.2. These are updated in the Protocol and the California Registry's reporting tool, CARROT, as often as they are updated by eGRID.

To look up your eGRID subregion using your zip code, please visit U.S. EPA's "Power Profiler" tool at [www.epa.gov/cleanenergy/energy-and-you/how-clean.html](http://www.epa.gov/cleanenergy/energy-and-you/how-clean.html).

Fuel used to generate electricity varies from year to year, so emission factors also fluctuate. When possible, you should use emission factors that correspond to the calendar year of data you are reporting. CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O emission factors for historical years are available in Appendix E. If emission factors are not available for the year you are reporting, use the most recently published figures.

### U.S. EPA Emissions and Generation Resource Integrated Database (eGRID)

The Emissions & Generation Resource Integrated Database (eGRID) provides information on the air quality attributes of almost all the electric power generated in the United States. eGRID provides search options, including information for individual power plants, generating companies, states, and regions of the power grid. eGRID integrates 24 different federal data sources on power plants and power companies, from three different federal agencies: EPA, the Energy Information Administration (EIA), and the Federal Energy Regulatory Commission (FERC). Emissions data from EPA are combined with generation data from EIA to produce values like pounds per megawatt-hour (lbs/MWh) of emissions, which allows direct comparison of the environmental attributes of electricity generation. eGRID also provides aggregated data to facilitate comparison by company, state or power grid region. eGRID's data encompasses more than 4,700 power plants and nearly 2,000 generating companies. eGRID also documents power flows and industry structural changes. [www.epa.gov/cleanenergy/egrid/index.htm](http://www.epa.gov/cleanenergy/egrid/index.htm).

Figure III.6.1 eGRID Subregions



Source: eGRID2007 Version 1.1, December 2008 (Year 2005 data).

**Los Angeles County Flood Control District (LACFCD)**

**Seawater Barrier Database**

**Observation Well Groundwater Elevation Data**

Observation Wells: 9EG, 9KN, and 9XY1

**LACFCD's Seawater Barrier database: Groundwater Elevations at Observation Wells - Well 9EG**  
**Observation Well 9EG Protective Elevation: 13.6 feet above mean sea level**

PROJ	FCD	AQUIFER	Date	ELEV
9EG	726AE	LOWER SAN PED	20090105	5.40
9EG	726AE	LOWER SAN PED	20090203	5.40
9EG	726AE	LOWER SAN PED	20090303	5.40
9EG	726AE	LOWER SAN PED	20090318	5.60
9EG	726AE	LOWER SAN PED	20090406	5.90
9EG	726AE	LOWER SAN PED	20090518	2.80
9EG	726AE	LOWER SAN PED	20090629	4.50
9EG	726AE	LOWER SAN PED	20090716	4.70
9EG	726AE	LOWER SAN PED	20090805	4.70
9EG	726AE	LOWER SAN PED	20090813	4.40
9EG	726AE	LOWER SAN PED	20090915	4.40
9EG	726AE	LOWER SAN PED	20091020	4.60
9EG	726AE	LOWER SAN PED	20091116	4.90
9EG	726AE	LOWER SAN PED	20091209	5.40
9EG	726AE	LOWER SAN PED	20100105	5.80
9EG	726AE	LOWER SAN PED	20100106	9926.00
9EG	726AE	LOWER SAN PED	20100209	6.70
9EG	726AE	LOWER SAN PED	20100309	6.40
9EG	726AE	LOWER SAN PED	20100427	8.20
9EG	726AE	LOWER SAN PED	20100506	7.00
9EG	726AE	LOWER SAN PED	20100616	6.90
9EG	726AE	LOWER SAN PED	20100713	6.90

9EG	726AE	LOWER SAN PED	20100823	7.10
9EG	726AE	LOWER SAN PED	20100825	6.90
9EG	726AE	LOWER SAN PED	20100923	7.90
9EG	726AE	LOWER SAN PED	20101021	8.50
9EG	726AE	LOWER SAN PED	20101108	8.70
9EG	726AE	LOWER SAN PED	20101208	9.00
9EG	726AE	LOWER SAN PED	20110119	9.80
9EG	726AE	LOWER SAN PED	20110209	10.10
9EG	726AE	LOWER SAN PED	20110323	8.20
9EG	726AE	LOWER SAN PED	20110421	6.50
9EG	726AE	LOWER SAN PED	20110525	6.80
9EG	726AE	LOWER SAN PED	20110622	4.50
9EG	726AE	LOWER SAN PED	20110719	5.40
9EG	726AE	LOWER SAN PED	20110817	3.60
9EG	726AE	LOWER SAN PED	20110823	3.50
9EG	726AE	LOWER SAN PED	20110921	4.30
9EG	726AE	LOWER SAN PED	20111019	4.20
9EG	726AE	LOWER SAN PED	20111205	2.90
9EG	726AE	LOWER SAN PED	20111221	3.70
9EG	726AE	LOWER SAN PED	20120125	3.70
9EG	726AE	LOWER SAN PED	20120216	3.60
9EG	726AE	LOWER SAN PED	20120228	4.10
9EG	726AE	LOWER SAN PED	20120404	4.70



9EG	726AE	LOWER SAN PED	20120418	4.80
9EG	726AE	LOWER SAN PED	20120514	4.60
9EG	726AE	LOWER SAN PED	20120620	3.80
9EG	726AE	LOWER SAN PED	20120731	1.40
9EG	726AE	LOWER SAN PED	20120823	2.70
9EG	726AE	LOWER SAN PED	20120912	4.40
9EG	726AE	LOWER SAN PED	20121024	5.00
9EG	726AE	LOWER SAN PED	20121121	4.90
9EG	726AE	LOWER SAN PED	20121219	5.10
9EG	726AE	LOWER SAN PED	20130128	6.40
9EG	726AE	LOWER SAN PED	20130213	4.60
9EG	726AE	LOWER SAN PED	20130226	6.45
9EG	726AE	LOWER SAN PED	20130327	5.40
9EG	726AE	LOWER SAN PED	20130415	6.36
9EG	726AE	LOWER SAN PED	20130520	7.10
9EG	726AE	LOWER SAN PED	20130617	6.77
9EG	726AE	LOWER SAN PED	20130723	5.60
9EG	726AE	LOWER SAN PED	20130820	7.10
9EG	726AE	LOWER SAN PED	20130914	7.40
9EG	726AE	LOWER SAN PED	20130925	15.20
9EG	726AE	LOWER SAN PED	20131023	7.40
9EG	726AE	LOWER SAN PED	20131118	7.98
9EG	726AE	LOWER SAN PED	20131219	8.50

9EG	726AE	LOWER SAN PED	20140116	7.95
9EG	726AE	LOWER SAN PED	20140224	7.50

**LACFCD's Seawater Barrier database: Groundwater Elevations at Observation Wells - Well 9KN**  
**Observation Well 9KN Protective Elevation: 14.2 feet above mean sea level**

PROJ	FCD	AQUIFER	Date	ELEV
9KN	726AH	LOWER SAN PED	20090105	5.20
9KN	726AH	LOWER SAN PED	20090205	5.20
9KN	726AH	LOWER SAN PED	20090303	5.30
9KN	726AH	LOWER SAN PED	20090319	6.80
9KN	726AH	LOWER SAN PED	20090407	5.70
9KN	726AH	LOWER SAN PED	20090518	2.10
9KN	726AH	LOWER SAN PED	20090629	4.40
9KN	726AH	LOWER SAN PED	20090716	4.40
9KN	726AH	LOWER SAN PED	20090810	5.30
9KN	726AH	LOWER SAN PED	20090813	4.40
9KN	726AH	LOWER SAN PED	20090916	3.90
9KN	726AH	LOWER SAN PED	20091020	4.10
9KN	726AH	LOWER SAN PED	20091118	3.40
9KN	726AH	LOWER SAN PED	20091209	4.70
9KN	726AH	LOWER SAN PED	20100106	9926.00
9KN	726AH	LOWER SAN PED	20100112	85.50
9KN	726AH	LOWER SAN PED	20100209	5.90
9KN	726AH	LOWER SAN PED	20100302	5.70
9KN	726AH	LOWER SAN PED	20100412	5.90
9KN	726AH	LOWER SAN PED	20100506	6.20
9KN	726AH	LOWER SAN PED	20100617	6.10
9KN	726AH	LOWER SAN PED	20100713	6.10

9KN	726AH	LOWER SAN PED	20100824	6.50
9KN	726AH	LOWER SAN PED	20100830	8.00
9KN	726AH	LOWER SAN PED	20100923	7.20
9KN	726AH	LOWER SAN PED	20101021	7.70
9KN	726AH	LOWER SAN PED	20101108	7.90
9KN	726AH	LOWER SAN PED	20101223	8.70
9KN	726AH	LOWER SAN PED	20110119	9.10
9KN	726AH	LOWER SAN PED	20110215	9.20
9KN	726AH	LOWER SAN PED	20110322	7.20
9KN	726AH	LOWER SAN PED	20110420	6.30
9KN	726AH	LOWER SAN PED	20110516	5.80
9KN	726AH	LOWER SAN PED	20110622	3.80
9KN	726AH	LOWER SAN PED	20110720	5.80
9KN	726AH	LOWER SAN PED	20110817	3.00
9KN	726AH	LOWER SAN PED	20110830	6.30
9KN	726AH	LOWER SAN PED	20110920	3.60
9KN	726AH	LOWER SAN PED	20111019	3.70
9KN	726AH	LOWER SAN PED	20111205	2.70
9KN	726AH	LOWER SAN PED	20111221	3.40
9KN	726AH	LOWER SAN PED	20120125	3.20
9KN	726AH	LOWER SAN PED	20120228	4.70
9KN	726AH	LOWER SAN PED	20120305	3.30
9KN	726AH	LOWER SAN PED	20120327	3.80

9KN	726AH	LOWER SAN PED	20120416	4.20
9KN	726AH	LOWER SAN PED	20120516	4.10
9KN	726AH	LOWER SAN PED	20120620	3.20
9KN	726AH	LOWER SAN PED	20120718	0.40
9KN	726AH	LOWER SAN PED	20120823	2.30
9KN	726AH	LOWER SAN PED	20121002	3.30
9KN	726AH	LOWER SAN PED	20121017	4.10
9KN	726AH	LOWER SAN PED	20121121	4.60
9KN	726AH	LOWER SAN PED	20121218	4.90
9KN	726AH	LOWER SAN PED	20130128	5.00
9KN	726AH	LOWER SAN PED	20130221	5.90
9KN	726AH	LOWER SAN PED	20130226	5.02
9KN	726AH	LOWER SAN PED	20130327	5.10
9KN	726AH	LOWER SAN PED	20130415	5.18
9KN	726AH	LOWER SAN PED	20130520	5.73
9KN	726AH	LOWER SAN PED	20130617	5.35
9KN	726AH	LOWER SAN PED	20130718	1.40
9KN	726AH	LOWER SAN PED	20130820	5.80
9KN	726AH	LOWER SAN PED	20130914	6.20
9KN	726AH	LOWER SAN PED	20131007	7.10
9KN	726AH	LOWER SAN PED	20131023	6.40
9KN	726AH	LOWER SAN PED	20131118	7.07
9KN	726AH	LOWER SAN PED	20131219	7.70

9KN	726AH	LOWER SAN PED	20140116	6.57
9KN	726AH	LOWER SAN PED	20140224	6.60
9KN	726AH	LOWER SAN PED	20140227	7.50

**LACFCD's Seawater Barrier database: Groundwater Elevations at Observation Wells - Well 9XY1**  
**Observation Well 9XY1 Protective Elevation: 14.8 feet above mean sea level**

PROJ	FCD	AQUIFER	Date	ELEV
9XY1	727AZ	LOWER SAN PED	20090106	6.50
9XY1	727AZ	LOWER SAN PED	20090202	5.40
9XY1	727AZ	LOWER SAN PED	20090303	5.30
9XY1	727AZ	LOWER SAN PED	20090407	6.10
9XY1	727AZ	LOWER SAN PED	20090518	2.60
9XY1	727AZ	LOWER SAN PED	20090629	5.00
9XY1	727AZ	LOWER SAN PED	20090708	5.10
9XY1	727AZ	LOWER SAN PED	20090716	5.20
9XY1	727AZ	LOWER SAN PED	20090813	5.00
9XY1	727AZ	LOWER SAN PED	20090921	5.80
9XY1	727AZ	LOWER SAN PED	20091020	6.10
9XY1	727AZ	LOWER SAN PED	20091118	5.70
9XY1	727AZ	LOWER SAN PED	20091209	6.00
9XY1	727AZ	LOWER SAN PED	20100106	6.40
9XY1	727AZ	LOWER SAN PED	20100209	7.50
9XY1	727AZ	LOWER SAN PED	20100405	7.60
9XY1	727AZ	LOWER SAN PED	20100518	7.00
9XY1	727AZ	LOWER SAN PED	20100607	7.80
9XY1	727AZ	LOWER SAN PED	20100707	7.90
9XY1	727AZ	LOWER SAN PED	20100719	7.70
9XY1	727AZ	LOWER SAN PED	20100824	8.00
9XY1	727AZ	LOWER SAN PED	20100928	8.80

9XY1	727AZ	LOWER SAN PED	20101021	9.30
9XY1	727AZ	LOWER SAN PED	20101108	9.40
9XY1	727AZ	LOWER SAN PED	20101228	10.50
9XY1	727AZ	LOWER SAN PED	20110118	10.60
9XY1	727AZ	LOWER SAN PED	20110216	10.30
9XY1	727AZ	LOWER SAN PED	20110316	9.40
9XY1	727AZ	LOWER SAN PED	20110420	8.60
9XY1	727AZ	LOWER SAN PED	20110516	8.50
9XY1	727AZ	LOWER SAN PED	20110705	5.60
9XY1	727AZ	LOWER SAN PED	20110713	7.80
9XY1	727AZ	LOWER SAN PED	20110823	4.90
9XY1	727AZ	LOWER SAN PED	20110920	7.50
9XY1	727AZ	LOWER SAN PED	20111019	6.40
9XY1	727AZ	LOWER SAN PED	20111205	5.20
9XY1	727AZ	LOWER SAN PED	20111221	5.90
9XY1	727AZ	LOWER SAN PED	20120117	5.90
9XY1	727AZ	LOWER SAN PED	20120305	7.40
9XY1	727AZ	LOWER SAN PED	20120417	6.90
9XY1	727AZ	LOWER SAN PED	20120522	6.60
9XY1	727AZ	LOWER SAN PED	20120618	6.40
9XY1	727AZ	LOWER SAN PED	20120731	-6.60
9XY1	727AZ	LOWER SAN PED	20120821	5.40
9XY1	727AZ	LOWER SAN PED	20120904	0.20



9XY1	727AZ	LOWER SAN PED	20121002	5.90
9XY1	727AZ	LOWER SAN PED	20121031	7.10
9XY1	727AZ	LOWER SAN PED	20121115	6.00
9XY1	727AZ	LOWER SAN PED	20121219	7.60
9XY1	727AZ	LOWER SAN PED	20130227	7.00
9XY1	727AZ	LOWER SAN PED	20130416	8.00
9XY1	727AZ	LOWER SAN PED	20130528	8.60
9XY1	727AZ	LOWER SAN PED	20130618	7.80
9XY1	727AZ	LOWER SAN PED	20130806	6.70
9XY1	727AZ	LOWER SAN PED	20130910	7.50
9XY1	727AZ	LOWER SAN PED	20131022	7.70
9XY1	727AZ	LOWER SAN PED	20131119	8.50
9XY1	727AZ	LOWER SAN PED	20140121	8.30
9XY1	727AZ	LOWER SAN PED	20140218	13.90

# **Los Angeles County Flood Control District (LACFCD)**

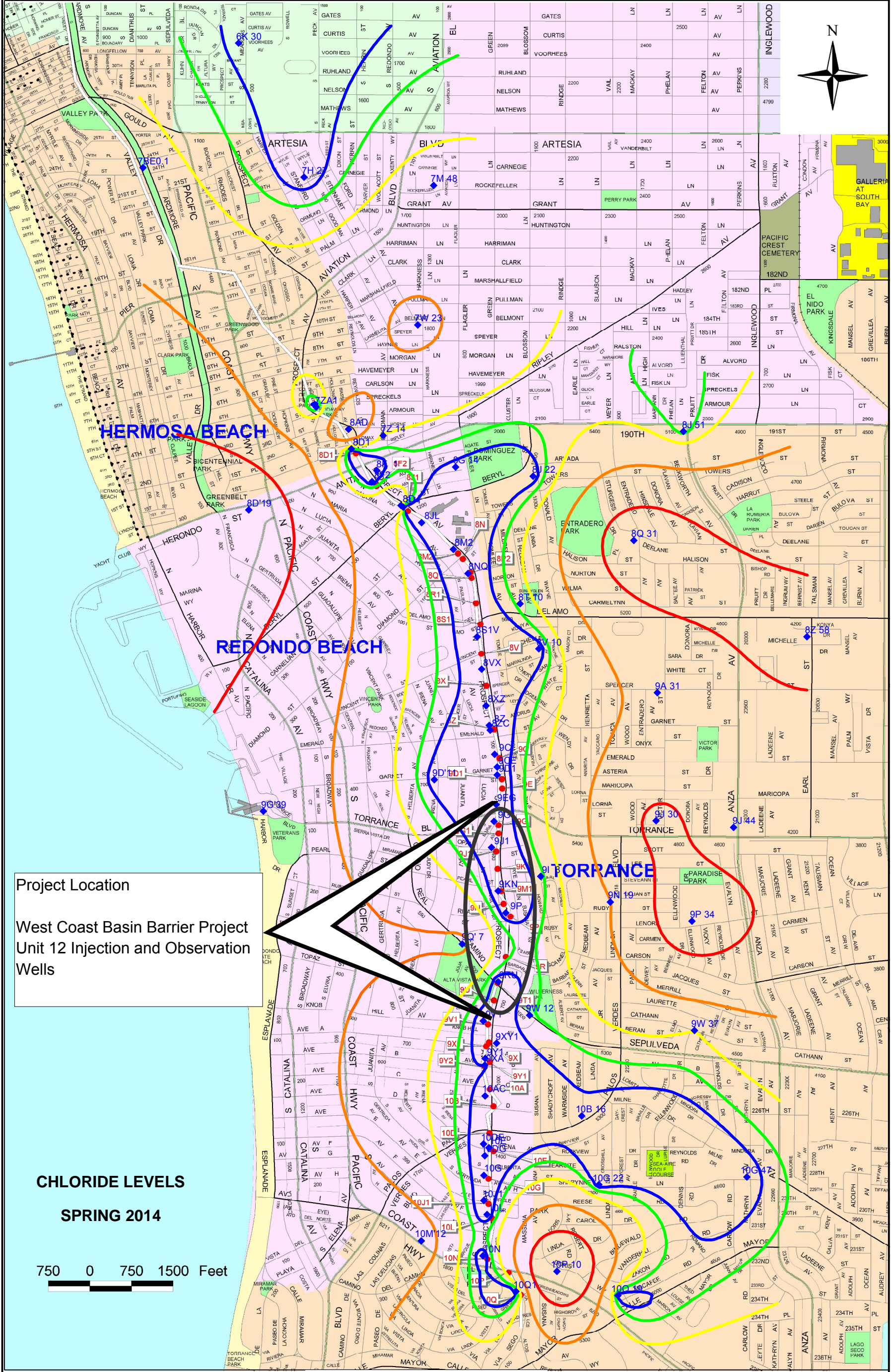
## **Map of Chloride Contours, Injection Wells, and Observation Wells**



# West Coast Basin Seawater Barrier Lower San Pedro Aquifer Chloride Level Contours

Date: 03/25/2014

Sheet 1 of 1



**Project Location**  
West Coast Basin Barrier Project  
Unit 12 Injection and Observation  
Wells

**CHLORIDE LEVELS**  
**SPRING 2014**



<b>Legend</b>			
◆ Observation Well Locations	— 250 mg/L Chloride Contour	— 1000 mg/L Chloride Contour	— 2500 mg/L Chloride Contour
● Injection Well Locations	— 500 mg/L Chloride Contour	— 5000 mg/L Chloride Contour	



**Project 11**  
**Rockhaven Well Project**  
**Supporting Documents**



June 24, 2011

Project 0155200000

Mr. Gary Roepke, P.E.  
Senior Civil Engineer  
Glendale Water & Power  
141 North Glendale Avenue  
Level 4  
Glendale, CA 91206-4496

**Re: Rockhaven Exploratory Well No. 1  
Glendale, California**

Dear Mr. Roepke:

This report summarizes installation and pump-testing of a new drinking water supply well, Rockhaven Exploratory Well No. 1, at the Rockhaven property in the Montrose area in the City of Glendale. The new well is situated at 2740 Hermosa Avenue, Glendale, California, near the south side of Hermosa Avenue, between La Crescenta Avenue and Pleasure Way near the northwest corner of the Rockhaven property. The well was installed by Bakersfield Well & Pump Company (BW&P) in general accordance with Glendale Water & Power (GWP) Bid Specifications No. 3426, dated August 9, 2010. The well construction was completed on April 14, 2011. AMEC Geomatrix (AMEC) worked under subcontract to Kennedy-Jenks Consultants, Inc. (KJC) to oversee key portions of the drilling, construction, and testing of the well. KJC was contracted by GWP to build the well and provide pipeline and other design services so the new well can be incorporated into the City's water-supply system.

## **1.0 SUMMARY**

Rockhaven Exploratory Well No. 1 was drilled and constructed approximately 20 feet south of the Rockhaven Pilot Well.<sup>1</sup> A pilot hole for the new well was drilled to 375 feet depth. Based on observations made during drilling, logging of drill cuttings, and geophysical logs for the pilot hole, the depth to bedrock was estimated to be 355 feet. The depth to bedrock (and the thickness of the alluvial aquifer) was significantly less than anticipated. As a result, the alluvial aquifer was thinner than expected at the well location and the depth of the Rockhaven Exploratory Well, originally anticipated to be on the order of 500 feet deep, is only 350 feet. Considering that the depth to groundwater is approximately 140 feet (based on monitoring of the nearby Rockhaven Pilot Well) and that the bottom of the alluvial aquifer (top of bedrock) is approximately 355 feet deep, a perforated interval (casing screen depth) of approximately 220 to 335 feet was selected.

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<sup>1</sup> The construction of the Rockhaven Pilot Well is summarized in a letter report to Mr. Leo Chan of GWP, Dated June 30, 2009, prepared by AMEC Geomatrix.

The completed 12-inch-diameter, stainless steel well consists of blank casing from the ground surface to 220.6 feet depth, wire-wrapped well screen from 220.6 feet to 335 feet depth, and there is a 15-foot deep blank casing sump from 335 to 350.5 feet depth. The well includes a 1.5-inch diameter sounding tube in the gravel pack, and the sanitary seal extends from the ground surface down to approximately 164 feet deep. During pump testing of the well, pumping at a constant rate of approximately 420 gallons per minute (gpm) for a period of 52.5 hours resulted in a water level drawdown in the well of approximately 84 feet and a resulting water level in the well that was approximately 3 feet below the top of the well screen.

Based on the testing performed, the long-term production rate for the well is anticipated to be between 400 and 450 gallons per minute (gpm). For comparison, there are approximately a dozen other water production wells in the Verdugo Groundwater Basin, and the average production rate for those wells is on the order of 270 gpm; much lower than the anticipated production rate for the Rockhaven well. At a pumping rate of 425 gpm, the well would produce approximately 685 acre-feet of water per year.

Chemical analyses for the water produced by the new well were performed at the direction of GWP, and as a result, are not discussed in detail in this report. The following sections of this letter report provide additional information regarding the well drilling, construction, and testing.

## **2.0 DRILLING, ZONE TESTING, WELL CONSTRUCTION, AND INITIAL DEVELOPMENT**

A 42-inch-diameter borehole for the well conductor casing was drilled to a depth of 51 feet on March 2, 2011 using a bucket auger drilling rig provided by Barney's Hole Digging Service, Inc. On March 3, fifty-five feet of 30-inch-outside-diameter steel pipe was inserted in the borehole and a sanitary seal created by the annular space filled with pre-mixed, 10.5-sack, sand-cement slurry which was pumped to the bottom of the borehole from the surface using a tremie pipe. The conductor casing and sanitary seal were installed consistent with California Department of Water Resources (DWR) guidelines for water supply well construction.<sup>2</sup>

A 17.5-inch-diameter pilot boring was drilled between March 11 and March 25, 2011 to a depth of 375 feet. The boring penetrated approximately 20 feet into the crystalline bedrock formation. The boring was drilled using a reverse circulation drilling rig and tri-cone drilling bit; the drilling fluid consisted of water supplied by a City-owned fire hydrant on Hermosa Ave. No additives, such as bentonite or EZ Mud®, were used any time during drilling. The use of the reverse circulation method and limiting the use of fluid additives helps to reduce potential clogging of the aquifer materials around the well bore and also reduces well development time. The reverse circulation method, however, results in water loss to the soil materials around the well bore during drilling.

Drilled cutting samples were collected by BW&P from a baffle box situated on the upstream side of the fluid return tank. Approximately one-half gallon of cuttings was collected for every 10 feet drilled and placed in a plastic bag. At the end of drilling select samples were sent to Roscoe Moss Company in Bakersfield, California for sieve analysis and sieve test results were used to select appropriate materials for well construction.

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<sup>2</sup> California Department of Water Resources, Southern Division, 2011: web page for Well Standards: [http://www.dpla.water.ca.gov/sd/groundwater/california\\_well\\_standards/well\\_standards.html](http://www.dpla.water.ca.gov/sd/groundwater/california_well_standards/well_standards.html) , accessed June 2011.



THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

## Annual Drinking Water Quality Report

Covering the reporting period of January–December 2012

# 2013

## WATER QUALITY EXCELLENCE



**METROPOLITAN'S WATER  
QUALITY IS EQUAL TO OR  
BETTER THAN REQUIRED  
TO SAFEGUARD PUBLIC  
HEALTH**

**READ THIS REPORT TO  
LEARN MORE**

about water provided  
by Metropolitan, how it  
compares favorably to all  
drinking water standards,  
and what is being done to  
further protect **19 million**  
**Southland consumers.**



# 2012 Water Quality Table

A	B	C	D	F	G	H					I
	Parameter	Units	State MCL [MRDL]	PHG (MCLG) [MRDLG]	Range Average	Weymouth Plant	Diemer Plant	Jensen Plant	Skinner Plant	Mills Plant	Major Sources in Drinking Water
	Percent State Project Water	%	NA	NA	Range Average	7 - 99 46	9 - 98 43	100 100	33 - 84 63	100 100	NA
E	<b>PRIMARY STANDARDS - Mandatory Health-Related Standards</b>										
	<b>CLARITY</b>										
	Combined Filter Effluent Turbidity	NTU %	TT=1 TT (a)	NA	Highest % ≤ 0.3	0.04 100	0.04 100	0.06 100	0.06 100	0.07 100	Soil runoff
	<b>MICROBIOLOGICAL</b>										
	Total Coliform Bacteria (b)	%	5.0	(0)	Range Average	<b>Distribution System-Wide:</b>		ND - 0.5 0.1			Naturally present in the environment
	Heterotrophic Plate Count (HPC) (c)	CFU/mL	TT	NA	Range Median	<b>Distribution System-Wide:</b>		TT TT			Naturally present in the environment
	<b>ORGANIC CHEMICALS</b>										
	Acrylamide	NA	TT	(0)	Range Average	TT TT	TT TT	TT TT	TT TT	TT TT	Water treatment chemical impurities
	Epichlorohydrin	NA	TT	(0)	Range Average	TT TT	TT TT	TT TT	TT TT	TT TT	Water treatment chemical impurities
	<b>INORGANIC CHEMICALS</b>										
	Aluminum (d)	ppb	1,000	600	Range Highest RAA	ND - 210 120	ND - 340 150	60-110 83	ND ND	65 - 160 120	Residue from water treatment process; natural deposits erosion
	Fluoride (e) (treatment-related)	ppm	2.0	1	Control Range	0.7 - 1.3	0.7 - 1.3	0.7 - 1.3	0.7 - 1.3	0.6 - 1.2	Erosion of natural deposits; water additive that promotes strong teeth
<b>Optimal Fluoride Level</b>					0.8	0.8	0.8	0.8	0.7		
Range Average					0.6 - 1.1 0.8	0.7 - 0.8 0.8	0.7 - 0.8 0.8	0.7 - 0.9 0.8	0.3 - 0.9 0.7		
					Range	<b>Distribution System-Wide:</b> 0.4 - 1.1					
	Nitrate (as N) (f)	ppm	10	10	Range Average	ND ND	ND ND	ND ND	ND ND	0.7 0.7	Runoff and leaching from fertilizer use; sewage; natural deposits erosion
	<b>RADIONUCLIDES (g)</b>										
	Gross Alpha Particle Activity	pCi/L	15	(0)	Range Average	ND - 3 ND	ND - 3 3	ND ND	ND - 3 ND	ND ND	Erosion of natural deposits
	Gross Beta Particle Activity (h)	pCi/L	50	(0)	Range Average	ND - 6 4	ND - 4 ND	ND - 4 ND	ND - 5 ND	ND ND	Decay of natural and man-made deposits
	Uranium	pCi/L	20	0.43	Range Average	1 - 2 2	2 2	ND - 2 1	ND - 2 1	ND - 1 1	Erosion of natural deposits
	<b>DISINFECTION BY-PRODUCTS, DISINFECTANT RESIDUALS, AND DISINFECTION BY-PRODUCTS PRECURSORS (i)</b>										
	Total Trihalomethanes (TTHM) (j)	ppb	80	NA	Range Average	42 - 48 45	40 - 50 45	8.0 - 19 11	10 - 19 14	12 - 18 15	By-product of drinking water chlorination
	Total Trihalomethanes (TTHM) (j)	ppb	80	NA	Range RAA	<b>Distribution System-Wide:</b> 7.6 - 70 <b>Distribution System-Wide:</b> 35					By-product of drinking water chlorination
	Haloacetic Acids (five) (HAA5) (k)	ppb	60	NA	Range Average	12 - 18 14	11 - 19 16	1.1 - 3.2 2.2	1.4 - 6.1 2.7	1.5 - 5.6 3.6	By-product of drinking water chlorination
	Haloacetic Acids (five) (HAA5) (k)	ppb	60	NA	Range RAA	<b>Distribution System-Wide:</b> 1.3 - 23 <b>Distribution System-Wide:</b> 16					By-product of drinking water chlorination
	Total Chlorine Residual	ppm	[4.0]	[4.0]	Range Highest RAA	<b>Distribution System-Wide:</b> 1.5 - 2.8 <b>Distribution System-Wide:</b> 2.3					Drinking water disinfectant added for treatment
	Bromate (l)	ppb	10	0.1	Range Highest RAA	NA NA	NA NA	3.7 - 6.9 5.2	1.2 - 11 6.5	ND - 11 3.4	By-product of drinking water ozonation
	DBP Precursor Control (TOC)	ppm	TT	NA	Range Average	TT TT	TT TT	TT TT	TT TT	TT TT	Various natural and man-made sources



## **Matt Mullarkey**

---

**From:** David Gould <dgould@cvwd.com>  
**Sent:** Wednesday, July 09, 2014 2:34 PM  
**To:** Matt Mullarkey  
**Subject:** FW: kwh/ac-ft

**David S. Gould, P.E.**  
**District Engineer**  
**Crescenta Valley Water District**  
**2700 Foothill Blvd.**  
**La Crescenta, CA 91214**  
**(818) 248-3925**  
**(818) 236-4119 (direct)**  
**(818) 284-5813 (cell)**  
**(818) 248-1659 (fax)**

---

**From:** Brook Yared  
**Sent:** Wednesday, July 09, 2014 2:33 PM  
**To:** David Gould  
**Subject:** kwh/ac-ft

477.5 KWH/ac-ft

Brook Yared, PE  
Associate Engineer  
Crescenta Valley Water District  
2700 Foothill Blvd.  
La Crescenta, CA 91214  
P: 818-248-3925  
F: 818-248-1659

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# Analysis of the Energy Intensity of Water Supplies for West Basin Municipal Water District

March, 2007

Robert C. Wilkinson, Ph.D.

### Energy Intensity of Water Supplies for West Basin Municipal Water District

	af/yr	Percentage of Total Source Type	kWh/af Conveyance Pumping	kWh/af MWD Treatment	kWh/af Recycled Treatment	kWh/af Groundwater Pumping	kWh/af Groundwater Treatment	kWh/af Desalination	kWh/af WBMWD Distribution	Total kWh/af	Total kWh/year
<b>Imported Deliveries</b>											
State Water Project (SWP) <sup>1</sup>	57,559	43%	3,000	44	NA	NA	NA	NA	0	3,044	175,209,596
Colorado River Aqueduct (CRA) <sup>1</sup> (other than replenishment water)	76,300	57%	2,000	44	NA	NA	NA	NA	0	2,044	155,957,200
<b>Groundwater<sup>2</sup></b>											
natural recharge	19,720	40%	NA	NA	NA	350	0	NA	0	350	6,902,030
replenished with (injected) SWP water <sup>1</sup>	9,367	19%	3,000	44	NA	350	0	NA	0	3,394	31,791,598
replenished with (injected) CRA water <sup>1</sup>	11,831	24%	2,000	44	NA	350	0	NA	0	2,394	28,323,432
replenished with (injected) recycled water	8,381	17%	205	0	790	350	0	NA	220	1,565	13,116,278
<b>Recycled Water</b>											
West Basin Treatment, Title 22	21,506	60%	205	NA	0	NA	NA	NA	285	490	10,537,940
West Basin Treatment, RO	14,337	40%	205	NA	790	NA	NA	NA	285	1,280	18,351,360
<b>Ocean Desalination</b>	20,000	100%	200	NA	NA	NA	NA	3,027	460	3,687	82,588,800

Notes:

NA Not applicable

<sup>1</sup> Imported water based on percentage of CRA and SWP water MWD received, averaged over an 11-year period. Note that the figures for imports do not include an accounting for system losses due to evaporation and other factors. These losses clearly exist, and an estimate of 5% or more may be reasonable. The figures for imports above should therefore be understood to be conservative (that is, the actual energy intensity is in fact higher for imported supplies than indicated by the figures).

<sup>2</sup> Groundwater values include entire basin, West Basin service area covers approximately 86% of the basin. Groundwater values are specific to aquifer characteristics, including depth, within the basin.



# California Climate Action Registry General Reporting Protocol

Reporting Entity-Wide Greenhouse Gas Emissions

Version 3.1 | January 2009



Thus, regional/power pool emission factors for electricity consumption can be used to determine emissions based on electricity consumed. If you can obtain verified emission factors specific to the supplier of your electricity, you are encouraged to use those factors in calculating your indirect emissions from electricity generation. If your electricity provider reports an electricity delivery metric under the California Registry's Power/Utility Protocol, you may use this factor to determine your emissions, as it is more accurate than the default regional factor. Utility-specific emission factors are available in the Members-Only section of the California Registry website and through your utility's Power/Utility Protocol report in CARROT.

This Protocol provides power pool-based carbon dioxide, methane, and nitrous oxide emission factors from the U.S. EPA's eGRID database (see Figure III.6.1), which are provided in Appendix C, Table C.2. These are updated in the Protocol and the California Registry's reporting tool, CARROT, as often as they are updated by eGRID.

To look up your eGRID subregion using your zip code, please visit U.S. EPA's "Power Profiler" tool at [www.epa.gov/cleanenergy/energy-and-you/how-clean.html](http://www.epa.gov/cleanenergy/energy-and-you/how-clean.html).

Fuel used to generate electricity varies from year to year, so emission factors also fluctuate. When possible, you should use emission factors that correspond to the calendar year of data you are reporting. CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O emission factors for historical years are available in Appendix E. If emission factors are not available for the year you are reporting, use the most recently published figures.

### U.S. EPA Emissions and Generation Resource Integrated Database (eGRID)

The Emissions & Generation Resource Integrated Database (eGRID) provides information on the air quality attributes of almost all the electric power generated in the United States. eGRID provides search options, including information for individual power plants, generating companies, states, and regions of the power grid. eGRID integrates 24 different federal data sources on power plants and power companies, from three different federal agencies: EPA, the Energy Information Administration (EIA), and the Federal Energy Regulatory Commission (FERC). Emissions data from EPA are combined with generation data from EIA to produce values like pounds per megawatt-hour (lbs/MWh) of emissions, which allows direct comparison of the environmental attributes of electricity generation. eGRID also provides aggregated data to facilitate comparison by company, state or power grid region. eGRID's data encompasses more than 4,700 power plants and nearly 2,000 generating companies. eGRID also documents power flows and industry structural changes. [www.epa.gov/cleanenergy/egrid/index.htm](http://www.epa.gov/cleanenergy/egrid/index.htm).

Figure III.6.1 eGRID Subregions



Source: eGRID2007 Version 1.1, December 2008 (Year 2005 data).

**Project 12**  
**Water Budget Based Rates Implementation**  
**Supporting Documents**

April 11, 2012

TO: CARLOS REYES

FROM: RANDAL ORTON<sup>1</sup>

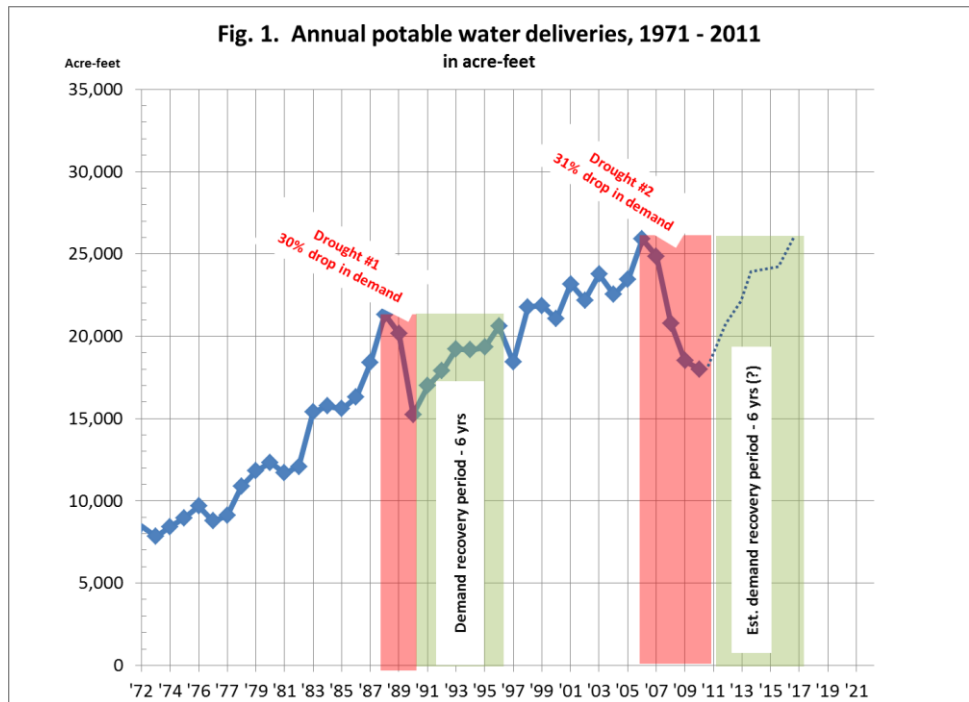
**SUBJECT: POST-DROUGHT WATER DEMAND**

Per your request, we compiled and examined District data<sup>2</sup> on potable water demand over the period 1972 through February 2012, focusing on changes in residential demand<sup>3</sup> during and immediately following both the 1991-2 and 2009-11 state-wide drought water shortage emergencies. Our objective was to estimate how quickly water demand following the recent drought might rise based on our experience following the 1991-2 drought, and to determine what factors most-strongly influence the recovery rate.

Based on our experience with the previous drought recovery (1992 – 1997), we estimate *annual* potable water demand may recover to its pre-drought level in 5-6 years (2016-17) if local weather is drier than normal, but may be delayed until 2017-18 if wetter conditions prevail. Peak summertime monthly demand will likely recover sooner (2014-15), regardless of weather, and peak summertime daily demands are expected to recover sooner still (2012-13).

**DISCUSSION**

Over the last 20 years, the District has declared a water shortage emergency twice in response to persistent, statewide droughts, once in the 1991-2 drought and again in the 2009-11 drought. Water use during both of these droughts fell about 30 percent from their pre-drought levels in response to conservation measures and financial penalties for over-usage (Fig. 1). Water demand



<sup>1</sup> D. Holliday (IS), M. Hamilton (F&A), G. Weston (CS), S. Harris (RC) and J. Dougall (RC) assisted in data compilation and analysis.

<sup>2</sup> Lvddata/district information/annuals/xls.

<sup>3</sup> We considered residential demand only, as it accounts for about 95% of total annual demand in the LVMWD service area.



## **Matt Mullarkey**

---

**From:** Dougall, Jan <jdougall@lvmwd.com>  
**Sent:** Thursday, June 12, 2014 4:21 PM  
**To:** Persephene St. Charles; Matt Mullarkey  
**Cc:** Brian Dietrick  
**Subject:** Percent blend water

Persephene & Matt,

Following up on the question you asked on the phone this last Tuesday on what the percent blend of potable water we're now getting – we give the details in our Att 3 – Project Justification (supplemental), but for the faster answer – we're still getting 100% State Water Project water.

Thanks again!

Jan Dougall  
Environmental Analyst  
Las Virgenes Municipal Water District  
4232 Las Virgenes Rd.  
Calabasas, CA 91302  
(818) 251-2167  
[jdougall@lvmwd.com](mailto:jdougall@lvmwd.com)



# Analysis of the Energy Intensity of Water Supplies for West Basin Municipal Water District

March, 2007

Robert C. Wilkinson, Ph.D.

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Figure III.6.1 eGRID Subregions



Source: eGRID2007 Version 1.1, December 2008 (Year 2005 data).

**Project 13**  
**Well No. 2 Rehabilitation Project**  
**Supporting Documents**



**MEMORANDUM**

March 21, 2014

**To:** Mr. Thomas Lee, P.E.  
Water Works Division  
City of Inglewood Public Works Department

**From:** Chris Wick, Earl LaPensee, & Richard Slade  
Richard C. Slade & Associates LLC

RCS Job No. 496-LAS01

**Re:** Preliminary Evaluation of Downwell Conditions  
Municipal-Supply Water Well No. 2  
City of Inglewood

**Introduction**

As an extension of our original contract with the City of Inglewood (City) to evaluate 2 other City wells (Nos. 1 and 4), this Memorandum provides the key findings and conclusions, along with our preliminary recommendations for further downwell actions, regarding existing City Well No. 2. Well No. 2, which is reported by the City to be inactive, has exhibited a significant decline in its pumping rate and specific capacity since the installation of a casing liner in 1999. The City has also recently reported that the well is experiencing pumping problems, namely the pump is “breaking suction.” Figure 1, “Well Location Map” shows the approximate location of this well and the locations of nearby City Well Nos. 1 & 4.

Recently, City staff requested RCS to also perform a downwell evaluation of Well No. 2 to help determine its current physical condition. As a result, our conclusions and recommendations, as presented herein, are based solely on the results of the analysis of the available data as provided by the City. No recent video surveys of the well have been performed to document the current, existing downwell condition of the well, and no independent water level monitoring or pumping tests have been performed by RCS for this project.



the full liner in May 1999. Following some rehabilitation work on this well between August and October 2009 by Layne, pumping test results revealed the well was pumped continuously at an average rate of 593 gpm for approximately 36 hours. Overall, the pumping rate has declined roughly 87% (381 gpm in February 2012) since the original, post-construction pumping test (3,000 gpm) in 1974. The specific capacity value has declined at least 95% (from 44.1 gpm/ft ddn in 1974 to 2.3 gpm/ft ddn in 2009).

Additionally, the City has reported that the pump breaks suction after being operational for only a few minutes; reported operational pumping rates prior to the City shutting the well down in December 2013 were in the range of only 150 to 160 gpm. One reason for the pump breaking suction is that the well has likely become severely plugged by biological growth (biofilm), thereby restricting the flow of water into the well. Another reason for the pump to break suction appears to be related to a decline in the static water levels (due to recent drought) and in the pumping water levels to depths at/near the pump intake. As recent as February 2012, the pumping water level was reported to be 443 ft btc. The current depth to the pump intake is approximately 531 ft btc (the pump bowls are installed from 520 ft to 531 ft btc). This depth setting places the pump intake directly opposite the well screen. These data reveal there were only 88 ft of available water level drawdown in February 2012. The decline in pumping water levels is likely related the overall decline in specific capacity of the well (due to bacterial plugging as noted above), and in the decline in pump efficiency due to the greatly increased amounts of water level drawdown over time. It is possible that the specific capacity of the well and overall well efficiency have been impacted by the formation of iron-related bacteria/growth and/or chemical precipitates on the well screens since the last time the well was rehabilitated in late-2009.

### **Preliminary Recommendations**

There are two basic options that the City can consider with regard to Well No. 2, namely Option 1, remove the well from service and destroy it and Option 2, rehabilitate the well. The following discusses each of these options.

#### **Option 1: Remove from Service and Destroy**

It appears that the well has become severely plugged and that rehabilitation of the well may not be very effective in recovering a significant amount of the specific capacity to make such



rehabilitation feasible. The funds expended on the well to rehabilitate it could be better used on constructing a replacement well elsewhere. Following the successful completion and testing of such a replacement well, then Well No. 2 should be destroyed. Proper destruction of the well could cost the City on the order of \$50,000 to \$60,000.00

#### Option 2: Rehabilitate the Well.

As noted above, it is not likely that rehabilitation of the well might not be successful in recovering enough of the specific capacity of the well to make such rehabilitation economically feasible. This rehabilitation is made more complicated due to the presence of, essentially, two well casings and two gravel packs, through which rehabilitations will need to be performed. For these reasons, RCS does not recommend rehabilitation of the well.

However, should the City decide to rehabilitate the well for any reason then such rehabilitation can be described in a set of Technical Specifications, with bid sheets, for the well, which can be prepared by RCS. The following provides a description of possible rehabilitation work that can be performed on the well:

#### Initial Work

- Mobilize a pump rig and/or truck-mounted crane and all other necessary equipment to the well site and remove the permanent pump, pump column, motor and suction pipe from the well. These items should be taken to the Contractor's office, where they can be properly inspected and effectively cleaned of all chemical and biological accumulations. Also, the Contractor can repair and/or replace any of this equipment, if/as necessary, based on the results of the forthcoming rehabilitation and downwell work.
- Following removal of the pump from the well, obtain a measurement to the current bottom of the casing, using a wire-line depth sounder, or similar device.
- Collect a representative water sample from the well, using a bailer-type sampler tool, for analysis of general minerals, selected inorganic chemicals (trace metals), and biofilm (to help characterize the biological species present in the water). This latter type of laboratory analysis can be performed by Water Systems Engineering (WSE) in Ottawa, Kansas, which specialized in speciation and interpretation of water-borne bacteria.
- Perform a clear viewing video survey of the well (including numerous side scans) to determine the current degree of growth on the casing walls, the condition of the screen, and to verify the depth to the sediment fill in the bottom of the casing. Side scan viewing of the casing should be performed at numerous intervals throughout the screened sections. Of particular interest would be the possible presence of corrosion





holes; the inner casing liner should be especially observed with regard to whether or not such holes might exist.

- Conduct careful brushing of the casing walls with a stiff nylon brush to help remove surface scale, biological encrustation and/or chemical precipitates. Careful bailing of the well should also be performed (recall that the liner contains wire-wrapped well screen) to remove sediment fill, if possible, that may still be present.

Data/information resulting from the above work should then be reviewed to determine the next course of action to be taken for the well. If indeed there is damage or failure to the permanent pump (i.e., from corrosion), then the extent of replacement and/or repair of the permanent pump assembly, where necessary, could be determined. If the casing liner appears to be in satisfactory condition, and if the well does not pump sand, then the City may wish to proceed with thorough rehabilitation of this well. In this latter case, the following well rehabilitation tasks can be performed on the well:

- Careful use of the Air Burst®, BoreBlast® and/or Well-Jet® methods to help further remove encrustation from the walls of the original casing and casing liner, and/or the gravel pack. The use of the Well-Jet® method will be especially beneficial in helping to thoroughly agitate the gravel pack between the two installed casing liners.
- Conduct chemical treatment of the well. The specific chemical treatment program will need to be designed for this specific well and would be based on the findings of water and scale sample analyses.
- Carefully airlift swab and surge the well casing to remove the chemicals and help develop the gravel packs, if possible. Following this, airlift any sand and debris from the bottom of the well casing.
- Install a temporary test pump to re-develop the well and measure sand concentrations, pumping rates, and water levels during pumping. Conduct step drawdown and constant rate pumping tests to determine the post-rehabilitation pumping rates(s) and specific capacity values of the newly-rehabilitated well at different pumping rates. Also collection of a complete suite of Title 22 analytes can be performed by the City at this time.
- Remove the temporary test pump and conduct a final video survey to check that the casing liner is free from obvious defects or damage; re-weld a steel cap atop the casing.
- Determine whether or not the existing permanent pump or an entirely new pump should now be installed and/or replaced.
- Based on the pumping test data, determine an appropriate depth setting for the permanent pump.



Approximate Costs

We estimate that the costs for the initial work tasks as stated above could be on the order of \$50,000. If all well rehabilitation work as summarized above is performed, it is estimated that the total contractor cost could be on the order of \$250,000 to \$300,000.

II.

Closure

This Memorandum was prepared for the City of Inglewood and presents our findings, conclusions and preliminary recommendations regarding the possible rehabilitation of City Well No. 2. This Memorandum was prepared in accordance with the care and skill generally exercised by reputable professionals, under similar circumstances and in this or similar localities. No other warranty, either express or implied, is made as to the professional advice presented. Should you have any questions regarding this Memorandum, please contact us.

Attachments: Figures 1, 2A and 2B

Tables 1 and 2

DWR Water Well Drillers Report

BESST Preliminary Report: Dynamic Flow Profile and Chloride Analysis

## Water Replenishment District of Southern California Payments (2008~2010)

Month	Well No. 1	Well No. 2	Well No. 4	Well No. 6	Total Production (Acre-Ft)	Unit Rate	TOTAL
Jan-08					0	\$149.00	\$0.00
Feb-08					0.00	\$149.00	\$0.00
Mar-08					0.00	\$149.00	\$0.00
Apr-08					0.00	\$149.00	\$0.00
May-08					0.00	\$149.00	\$0.00
Jun-08					0.00	\$149.00	\$0.00
Jul-08					0.00	\$153.00	\$0.00
Aug-08					0.00	\$153.00	\$0.00
Sep-08					0.00	\$153.00	\$0.00
Oct-08	53.11	71.19	103.08	203.83	431.21	\$153.00	\$65,975.13
Nov-08	0.00	68.98	102.13	191.54	362.65	\$153.00	\$55,485.45
Dec-08	0.05	60.91	89.48	176.17	326.61	\$153.00	\$49,971.33
Jan-09	0.00	53.32	76.72	167.95	297.99	\$153.00	\$45,592.47
Feb-09	0.00	40.64	47.95	149.82	238.41	\$153.00	\$36,476.73
Mar-09	29.88	62.84	91.51	165.74	349.97	\$153.00	\$53,545.41
Apr-09	70.76	58.47	83.29	148.25	360.77	\$153.00	\$55,197.81
May-09	42.61	59.30	84.77	144.66	331.34	\$153.00	\$50,695.02
Jun-09	49.46	56.78	74.79	146.71	327.74	\$153.00	\$50,144.22
Jul-09	53.75	57.26	76.84	155.75	343.60	\$181.85	\$62,483.66
Aug-09	98.68	33.94	65.18	153.65	351.45	\$181.85	\$63,911.18
Sep-09	87.35	0.00	69.72	145.80	302.87	\$181.85	\$55,076.91
Oct-09	72.96	0.00	57.97	147.94	278.87	\$181.85	\$50,712.51
Nov-09	84.41	0.00	75.09	138.32	297.82	\$181.85	\$54,158.57
Dec-09	83.56	0.00	75.92	145.28	304.76	\$181.85	\$55,420.61
Jan-10	68.84	0.00	73.52	139.74	282.10	\$181.85	\$51,299.89
Feb-10	70.89	42.53	60.75	127.09	301.26	\$181.85	\$54,784.13
Mar-10	66.38	68.11	67.48	37.11	239.08	\$181.85	\$43,476.70
Apr-10	29.41	69.04	63.74	95.83	258.02	\$181.85	\$46,920.94
May-10	57.29	78.88	65.29	146.24	347.70	\$181.85	\$63,229.25
Jun-10	45.54	75.92	58.30	134.86	314.62	\$181.85	\$57,213.65
Jul-10	49.88	78.88	54.00	132.48	315.24	\$205.00	\$64,624.20
Aug-10	24.10	76.89	50.42	130.54	281.95	\$205.00	\$57,799.75
Sep-10	32.27	71.33	45.30	124.12	273.02	\$205.00	\$55,969.10
Oct-10	32.89	71.70	43.28	124.25	272.12	\$205.00	\$55,784.60
Nov-10	36.34	66.33	38.83	119.52	261.02	\$205.00	\$53,509.10
Dec-10	1.01	70.68	42.18	128.80	242.67	\$205.00	\$49,747.35
Jan-11	37.97	65.49	37.93	119.34	260.73	\$205.00	\$53,449.65

823.47 =>AF of produciton for 12 months after 2009 rehabilitation in AF

## City of Inglewood Sanford Anderson Water Treatment Plant

Energy Consumption per Water Production (Acre-Feet)

<b>Date</b>	<b>Total Production (Acre-Ft)</b>	<b>Total Energy Used(kWh)</b>	<b>Energy Consumption per unit (kWh / ac-ft)</b>
May-14		87,019	
Apr-14	130.10	73,576	565.53
Mar-14	154.47	89,590	579.98
Feb-14	130.81	84,786	648.16
Jan-14	163.17	83,361	510.88
Dec-13	161.73	84,803	524.35
Nov-13	177.83	95,171	535.18
Oct-13	188.78	92,942	492.33
Sep-13	188.27	90,257	479.40
Aug-13	148.73	78,147	525.43
Jul-13	178.60	95,760	536.17
Jun-13	197.11	95,070	482.32
		<b>AVERAGE</b>	<b>534.52</b>

# Groundwater Assessment Study



A Status Report on the Use of Groundwater in the  
Service Area of the Metropolitan Water District of  
Southern California

Report Number 1308

*September 2007*

Between water years 1985/86 and 2004/05, about 9,800 AFY was stored in-lieu. These and other storage programs are discussed in more detail below.

**Table 4-3**  
**Summary of Production Wells in the West Coast Basin**

Category	Number of Wells	Estimated Production Capacity (AFY)	Average Production 1985-2004 (AFY)	Well Operation Cost (\$/AF)
Municipal	111	Data not available	48,797	\$65 Pumping Cost
Active	63			
Inactive	48			
Other	761			
<b>Total</b>	<b>872</b>			

Source: WRD, 2006d and DWR, 2005

### Other Production

Production data provided above includes water that is desalted by the Goldsworthy and Brewer desalters. These facilities are discussed in more detail below.

### ASR Wells

There are no ASR wells in the West Coast Basin.

### Spreading Basin

There are no spreading basins in the West Coast Basin.

### Seawater Intrusion Barriers

There are two seawater intrusion barriers in the West Coast Basin: the West Coast Basin Barrier Project and the Dominguez Gap Barrier Project. Amounts of water injected are summarized in **Figure 4-5**. An average of about 24,400 AFY was injected into these barriers between water years 1985/86 and 2004/05.

The West Coast Basin Barrier Project, which began operation in 1953, is a line of 153 injection wells that parallels the coastline from Los Angeles International Airport to the Palos Verdes Hills. It is owned and operated by the Los Angeles County Department of Public Works. Since 1995, the West Coast Basin Barrier Project has injected an approximate 35 percent blend of imported water from Metropolitan and tertiary (including reverse osmosis) treated wastewater from the Hyperion Plant. It injects water into the “200-foot sand”, Silverado and Lower San Pedro aquifers to impede seawater intrusion (LACDPW, 2006).

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Robert C. Wilkinson, Ph.D.

### Energy Intensity of Water Supplies for West Basin Municipal Water District

	af/yr	Percentage of Total Source Type	kWh/af Conveyance Pumping	kWh/af MWD Treatment	kWh/af Recycled Treatment	kWh/af Groundwater Pumping	kWh/af Groundwater Treatment	kWh/af Desalination	kWh/af WBMWD Distribution	Total kWh/af	Total kWh/year
<b>Imported Deliveries</b>											
State Water Project (SWP) <sup>1</sup>	57,559	43%	3,000	44	NA	NA	NA	NA	0	3,044	175,209,596
Colorado River Aqueduct (CRA) <sup>1</sup> (other than replenishment water)	76,300	57%	2,000	44	NA	NA	NA	NA	0	2,044	155,957,200
<b>Groundwater<sup>2</sup></b>											
natural recharge	19,720	40%	NA	NA	NA	350	0	NA	0	350	6,902,030
replenished with (injected) SWP water <sup>1</sup>	9,367	19%	3,000	44	NA	350	0	NA	0	3,394	31,791,598
replenished with (injected) CRA water <sup>1</sup>	11,831	24%	2,000	44	NA	350	0	NA	0	2,394	28,323,432
replenished with (injected) recycled water	8,381	17%	205	0	790	350	0	NA	220	1,565	13,116,278
<b>Recycled Water</b>											
West Basin Treatment, Title 22	21,506	60%	205	NA	0	NA	NA	NA	285	490	10,537,940
West Basin Treatment, RO	14,337	40%	205	NA	790	NA	NA	NA	285	1,280	18,351,360
<b>Ocean Desalination</b>	20,000	100%	200	NA	NA	NA	NA	3,027	460	3,687	82,588,800

Notes:

NA Not applicable

<sup>1</sup> Imported water based on percentage of CRA and SWP water MWD received, averaged over an 11-year period. Note that the figures for imports do not include an accounting for system losses due to evaporation and other factors. These losses clearly exist, and an estimate of 5% or more may be reasonable. The figures for imports above should therefore be understood to be conservative (that is, the actual energy intensity is in fact higher for imported supplies than indicated by the figures).

<sup>2</sup> Groundwater values include entire basin, West Basin service area covers approximately 86% of the basin. Groundwater values are specific to aquifer characteristics, including depth, within the basin.





# California Climate Action Registry General Reporting Protocol

Reporting Entity-Wide Greenhouse Gas Emissions

Version 3.1 | January 2009



Thus, regional/power pool emission factors for electricity consumption can be used to determine emissions based on electricity consumed. If you can obtain verified emission factors specific to the supplier of your electricity, you are encouraged to use those factors in calculating your indirect emissions from electricity generation. If your electricity provider reports an electricity delivery metric under the California Registry's Power/Utility Protocol, you may use this factor to determine your emissions, as it is more accurate than the default regional factor. Utility-specific emission factors are available in the Members-Only section of the California Registry website and through your utility's Power/Utility Protocol report in CARROT.

This Protocol provides power pool-based carbon dioxide, methane, and nitrous oxide emission factors from the U.S. EPA's eGRID database (see Figure III.6.1), which are provided in Appendix C, Table C.2. These are updated in the Protocol and the California Registry's reporting tool, CARROT, as often as they are updated by eGRID.

To look up your eGRID subregion using your zip code, please visit U.S. EPA's "Power Profiler" tool at [www.epa.gov/cleanenergy/energy-and-you/how-clean.html](http://www.epa.gov/cleanenergy/energy-and-you/how-clean.html).

Fuel used to generate electricity varies from year to year, so emission factors also fluctuate. When possible, you should use emission factors that correspond to the calendar year of data you are reporting. CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O emission factors for historical years are available in Appendix E. If emission factors are not available for the year you are reporting, use the most recently published figures.

### U.S. EPA Emissions and Generation Resource Integrated Database (eGRID)

The Emissions & Generation Resource Integrated Database (eGRID) provides information on the air quality attributes of almost all the electric power generated in the United States. eGRID provides search options, including information for individual power plants, generating companies, states, and regions of the power grid. eGRID integrates 24 different federal data sources on power plants and power companies, from three different federal agencies: EPA, the Energy Information Administration (EIA), and the Federal Energy Regulatory Commission (FERC). Emissions data from EPA are combined with generation data from EIA to produce values like pounds per megawatt-hour (lbs/MWh) of emissions, which allows direct comparison of the environmental attributes of electricity generation. eGRID also provides aggregated data to facilitate comparison by company, state or power grid region. eGRID's data encompasses more than 4,700 power plants and nearly 2,000 generating companies. eGRID also documents power flows and industry structural changes. [www.epa.gov/cleanenergy/egrid/index.htm](http://www.epa.gov/cleanenergy/egrid/index.htm).

Figure III.6.1 eGRID Subregions



Source: eGRID2007 Version 1.1, December 2008 (Year 2005 data).



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**RICHARD C. SLADE & ASSOCIATES LLC**  
**CONSULTING GROUNDWATER GEOLOGISTS**

**WELL SITE FEASIBILITY  
AND  
PRELIMINARY WELL DESIGN REPORT  
FOR  
PROPOSED WELL No. 7  
CITY OF INGLEWOOD  
LOS ANGELES COUNTY, CALIFORNIA**

**Prepared For:  
The City of Inglewood**

**Prepared By:  
Richard C. Slade & Associates LLC  
Consulting Groundwater Geologists  
Studio City, California  
and  
Tetra Tech, Inc.  
Irvine, California**

**Job No. 496-LAS01**

**March 2014**

Available historic groundwater quality data in nearby City wells reveal that wells in the region generally produce water that is potable. Constituents of concern (COCs) in these wells are iron (Fe), manganese (Mn), and total dissolved solids (TDS). In some groundwater samples from certain City wells, each COC has occasionally been detected at concentrations exceeding its respective California Department of Public Health (CDPH) applicable Primary or Secondary Maximum Contaminant Level (MCL). Because of the proximity of the proposed well site to active City Well No. 6, it appears that water quality in the new well will be generally similar to that in Well No. 6.

The results of this hydrogeologic evaluation reveal that a new well at the City-selected site could have a pumping capacity of 1,500 to 2,000 gpm, but with the possibility of obtaining groundwater that might require treatment for at least TDS, Fe, and Mn. The following outlines the general conditions and the basic preliminary design for the new well:

- An anticipated drilling depth of 700 ft bgs.
- Downhole isolated aquifer zone testing to be performed in a few depth-discrete aquifers in the open borehole to evaluate potential water quality conditions, including TDS, Fe, Mn and perchlorate.
- Construct the well to a cased depth of 680 ft bgs, using 20-inch inside diameter high strength, low alloy (HSLA) casing. Final depth and design of the well to be based on the geophysical electric log, on the results of downhole isolated aquifer zone testing in the pilot hole, and on the results of geologically logging the drill cuttings from the pilot hole.
- An estimated current SWL on the order of 160 to 170 ft bgs.
- At a pumping rate of 2,000 gpm and using an anticipated current specific capacity for the new well in the range of 30 to 50 gpm/ ft ddn, the current PWL could be at a depth of about 270 to 300 ft bgs. Therefore, a permanent pump depth setting of approximately 320 ft to 350 ft bgs is currently anticipated.
- Preliminary costs for the drilling, construction, development and testing of the new well could range from approximately \$782,000 for high strength, low alloy (HSLA) to as high as \$995,000 for stainless steel casing. In addition, the selected well site could incur an additional estimated cost of \$100,000 for demolition activities to be performed prior to well construction.

As noted above, it is possible that groundwater pumped from the completed well could have concentrations of TDS, Fe and Mn above their respective, current MCLs. However, we understand that groundwater extracted from the new well could be pumped to the City's existing treatment plant. Therefore, no provisions for wellhead treatment of the pumped groundwater would need to be provided for this project.

Recommended design parameters for the permanent pump installation include a submersible pump, in order to help mitigate the impact of noise on nearby residences. The pump/motor can be controlled with an electrical motor control center (MCC). The entire wellhead assembly, piping, and pump motor can be enclosed with a building with a hatch opening at the top, for security reasons and so that later removal of the pump can be facilitated. A cost of \$1,600,000 for equipping the well is preliminarily estimated at this time.

**Project 14**  
**Pomona Basin Regional Groundwater Project**  
**Supporting Documents**

# FINAL Technical Memorandum

## Pomona Basin Regional Groundwater Project

**Subject:** Alternatives Evaluation

**Prepared For:** Puente Basin WA

**Prepared by:** Brian Dietrick, RMC  
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**Date:** November 15, 2012

**Reference:** 0558-001

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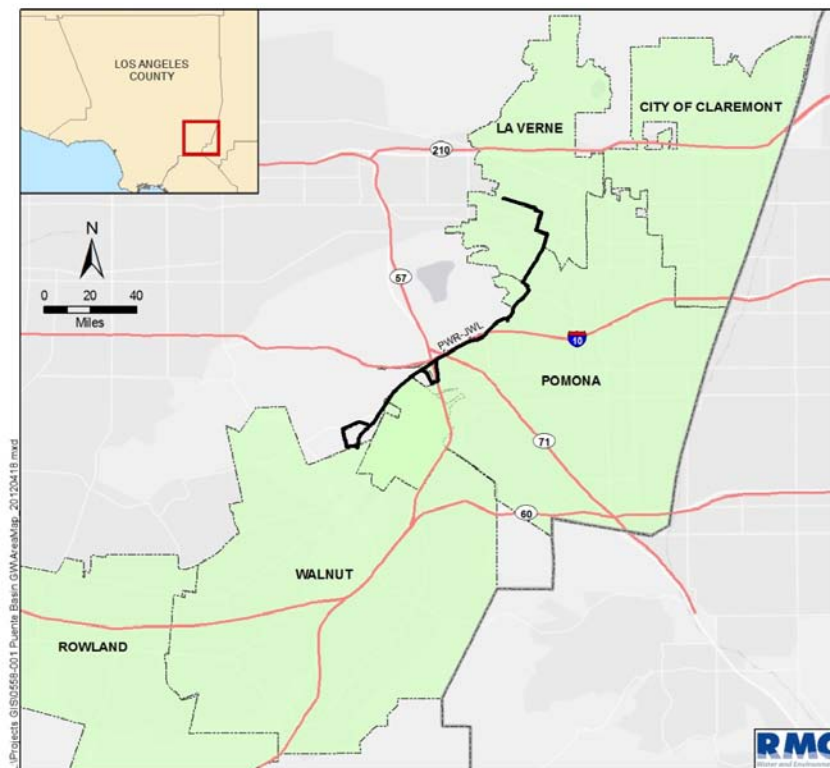
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# 1 Introduction

The overall objective of the Pomona Basin Regional Groundwater Project (Project) is to identify and begin implementation of project components that will provide Puente Basin Water Agency (PBWA) with 3,000 to 5,000 acre-feet per year (AFY) of Six Basins (including Pomona Basin ) groundwater supply. PBWA is a joint powers authority formed between the Walnut Valley Water District (WVWD) and Rowland Water District (RWD). Walnut Valley Water District includes all of the City of Diamond Bar, and portions of the Cities of Walnut, Industry, West Covina, and Pomona, and the eastern portion of the unincorporated Rowland Heights area. Rowland Water District serves portions of unincorporated Rowland Heights, Hacienda Heights and La Puente, the City of Industry and the City of West Covina.

The Project is part of the PBWA Water Supply Reliability Program which seeks to increase the diversification of PBWA water supplies through the development and implementation of regional and multi-benefit projects and decrease dependence on imported water.

**Figure 1-1: Project Area**



The objective of this Technical Memorandum (TM) is to describe and evaluate alternatives and identify a preferred alternative that will secure and deliver Six Basins groundwater supply to WVWD and RWD. All of the alternatives developed would be able to supply 5,000 AFY but are comprised of smaller building blocks<sup>1</sup> allowing project implementation to be phased relative to incremental costs and other factors.

All of the alternatives discussed in this TM supply groundwater from local aquifers to the Pomona-Walnut-Rowland Joint Water Line (PWR-JWL). The PWR-JWL is an existing pipeline that conveys treated, imported water from Three Valleys Municipal Water District’s (TVMWD) Miramar Treatment Plant and the Metropolitan Water District of Southern California (MWD) Weymouth Treatment Plant (Weymouth) southward first to the City of Pomona, then to Walnut Valley Water District (WVWD) and

<sup>1</sup> Alternatives that deliver 3,000 AFY are incorporated into alternatives that deliver 5,000 AFY.



Rowland Water District (RWD). The pipeline ranges in diameter from 42 to 60 inches and conveys up to 141 cubic feet per second (cfs). Each of the three participating agencies owns a share of the pipeline capacity. Depending on which alternative is identified as the final preferred alternative, it may be necessary to re-permit a portion of the PWR-JWL to allow for in-pipe blending of raw groundwater with treated, imported water.

The potential partnering agencies for this project are City of Pomona, City of La Verne, TVMWD, and Golden State Water Company (GSWC). These partnering agencies already collaborate through the following existing relationships:

- City of Pomona, RWD and WVWD are all members of the Pomona-Walnut-Rowland Joint Waterline Commission, which is a JPA that owns and operates the PWR-JWL.
- City of Pomona, La Verne, GSWC, and TVMWD are all agencies with adjudicated groundwater pumping rights within the Six Basins Watermaster.
- PBWA is a JPA that consists of member water districts RWD and WVWD. These two water districts are both situated at or near the southern terminus of the PWR-JWL and are both 100% reliant on imported water.

This alternatives analysis incorporates study work from previous TMs written by RMC, including the following:

- Funding TM (Nov. 30, 2011)
- Supply Options TM (Dec. 30, 2011)
- Facility Options TM (Feb. 10, 2012)

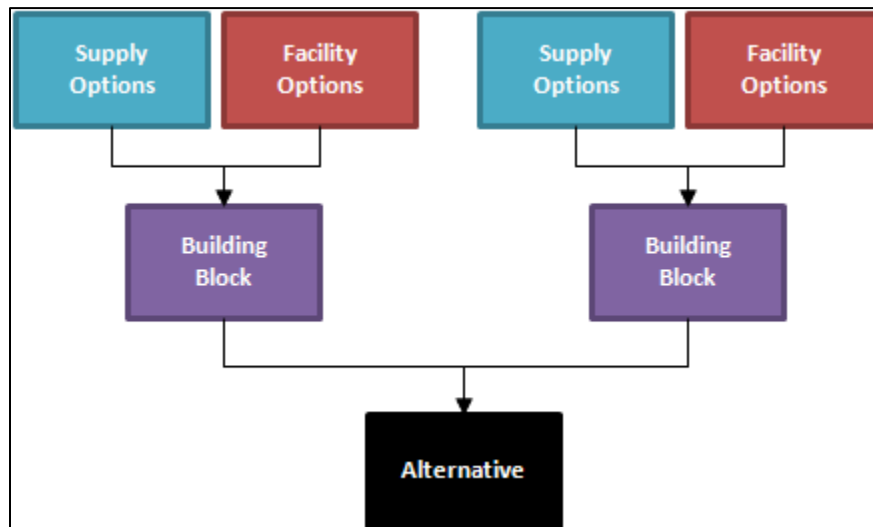
The general alternatives development process utilized in this TM is as follows:

1. Using the list of Supply Options and Facility Options identified in previous TMs, eliminate options that are infeasible or that do not meet the overall objectives of the project.
2. Using the list of Supply Options and Facility Options that remain, develop a list of building blocks. Each building block is a discrete combination of all or some of the following elements:
  - A supply source
  - A replenishment location for surface spreading and corresponding annual recharge quantity for groundwater recharge of untreated Tier 1 imported water where necessary to augment PBWA's pumping allocation
  - A well or group of source wells (new or existing) in a discrete geographic location
  - A group of facilities (new or existing) for treating (if necessary) and supplying groundwater to the PWR-JWL; these facilities consist of some combination of treatment, conveyance, pumping, and/or in-pipe blending
  - a leasing or purchasing arrangement for acquiring the groundwater pumping rights necessary for PBWA to secure the groundwater supply
3. Develop a planning-level cost estimate for each building block, expressed in terms of total initial capital project cost and dollars per acre-foot (\$/AF) life cycle costs for capital and operation and maintenance (O&M).
4. Combine building blocks together into full project alternatives. Of the nineteen alternatives that resulted, ten employ in-pipe blending to meet drinking water quality objectives, and nine employ treatment infrastructure (new and existing) to meet drinking water quality objectives.



5. Narrow the nineteen alternatives by selecting the eight alternatives with the lowest overall \$/AF life cycle costs.
6. Characterize and rank the eight alternatives according to non-economic criteria.
7. Choose one preferred blending alternative and one preferred non-blending alternative based on life cycle cost, initial capital cost, and non-economic criteria. The purpose of choosing both a blending and a non-blending alternative is that the permitting viability of the blending alternatives is dependent upon discussions with California Department of Public Health (CDPH).

**Figure 1-2: Process for Development of Alternatives**



## 2 Summary of Supply Options and Facility Options

This section summarizes the supply and facility options developed in previous TMs.

### 2.1 Supply Options

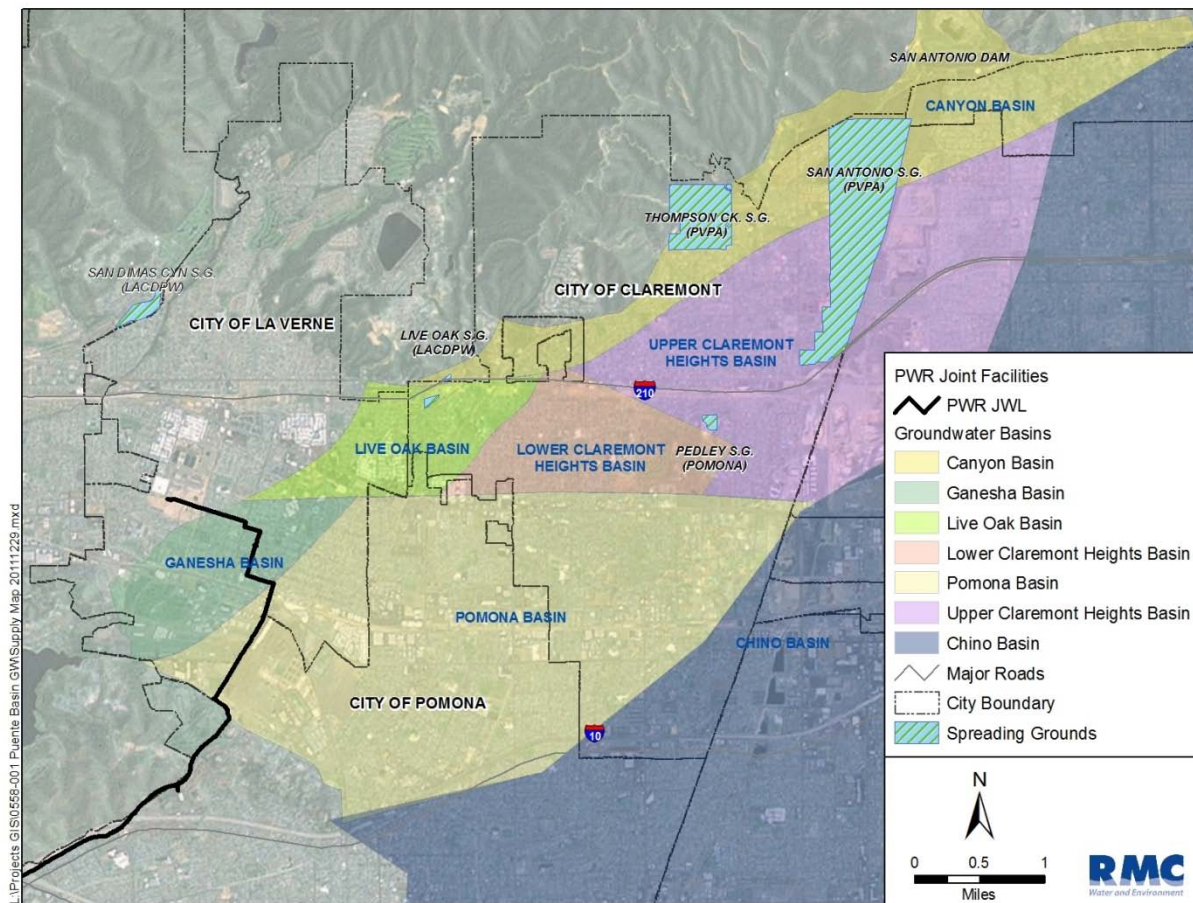
Figure 2-1 shows the groundwater basins that are candidate sources of supply for the Project. The PWR-JWL is located near the groundwater basins that make up the Six Basins. PBWA does not overlie Six Basins, but Six Basins represents a major regional potential source of groundwater in the vicinity of PBWA. The Six Basins consist of Canyon, Lower Claremont Heights, Upper Claremont Heights, Pomona, Ganesha, and Live Oak groundwater basins. Of these six basins, four have adjudicated pumping limits within the Six Basins Watermaster: Canyon, Lower Claremont Heights, Upper Claremont Heights, and Pomona.

The potential partnering agencies for this project are PBWA, City of Pomona, City of La Verne, Golden State Water Company (GSWC), and TVMWD. Of these agencies, PBWA is the only agency that does not have existing pumping rights within the Six Basins Watermaster adjudication agreement.

The recipient of the 5,000 AFY of supply contemplated in this TM will be PBWA via the PWR-JWL. Of the six basins shown in Figure 1, three basins were considered to be candidate sources of supply to the Project, because of their proximity to the PWR-JWL. These three basins are as follows:

- Pomona Basin (adjudicated)
- Live Oak Basin (unadjudicated)
- Ganesha Basin (unadjudicated)

Figure 2-1: Six Basins Groundwater Basins



The other reason these three basins were selected, is the potential for using existing well and groundwater treatment infrastructure owned by the cities of Pomona and La Verne. Both of these cities have been in recent discussions with PBWA about the possibility of rehabilitating, modifying, or expanding this infrastructure to enter into a joint project to supply up to 5,000 AFY to PBWA, with potential additional supplies above 5,000 AFY going to Pomona and/or La Verne.

The other three groundwater basins within Six Basins (Lower Claremont Heights, Upper Claremont Heights, and Canyon) were not considered because of their considerable distance from the PWR-JWL and from PBWA.

Several agency cooperation scenarios that can provide PBWA with local supply were examined in the Supply Options TM. Based upon this analysis, PBWA can do the following:

- Lease existing excess pumping rights from neighboring Six Basins agencies who have “carryover”, i.e., unused annual pumping allotments which represent the difference between the agency’s annual share of the groundwater Operational Safe Yield (OSY) in Six Basins and actual annual pumping by the neighboring agency.
- Create a “pool” of carryover from multiple agencies within Six Basins for use by PBWA for the Project. Implementation of this supply option would require approval from the Six Basins Watermaster.

- Lease existing Six Basins pumping rights currently being used by neighboring agencies with access to other supplies that could be used in-lieu of Six Basins (e.g., agencies could shift pumping to other basins or expand use of surface water supply).
- Pump in unadjudicated basins (Live Oak and Ganesha).
- Purchase raw imported water and recharge in existing spreading basins to establish PBWA pumping rights.
- Implement a Six Basins Watermaster “Special Project” which would allow groundwater pumping by PBWA in an amount no more than the underflow from the Pomona Basin to the Chino Basin, two major regional aquifers. Underflow can also be described as loss in storage because of interbasin groundwater flow. “Special Project” is a Six Basins Watermaster term which indicates that the project has a Regional benefit which exempts the additional pumping generated by the project from being counted against the adjudicated pumping limits for Six Basins.

The supply options and associated potential yields in AFY are summarized in Table 1.

**Table 1: Summary of Supply Options**

Option	Supply Source	From Agency	Supply Volume Available
P1	Pomona Basin	Lease of pumping rights from La Verne to PBWA	Up to 400 AFY
P2	Pomona Basin	Lease of pumping rights from GSWC to PBWA	Up to 600 AFY
P3	Pomona Basin	Lease of pumping rights from GSWC to PBWA, plus provision of treated water to GSWC from regional treatment plant	Up to 600 AFY
P4	Pomona Basin	Lease of pumping rights from Pomona to PBWA through Pomona’s shift in pumping to Chino Basin	2,000 AFY
P5	Pomona Basin	Exchange of Chino Basin rights for Six Basin rights between Pomona and Upland	2,000 AFY
P6	Pomona Basin	Lease of pumping rights from Pomona to PBWA through treatment of raw imported water at Pedley Filtration Plant	1,500 AFY
P7	Pomona Basin underflow to Chino Basin	Pump groundwater at the San Jose fault to capture groundwater underflow to Chino Basin	3,000 AFY
P8	Pomona Basin	San Antonio Water Company would lease local surface water to GSWC in return for Six Basins rights to be pumped for PBWA	5,000 AFY
P9	Pomona Basin	Six Basins Watermaster would create a pool of water made up of carryover	Up to 3,000 AFY
G1	Ganesha Basin	La Verne would allow PBWA to pump in the Ganesha Basin	Unknown
LO1	Live Oak Basin	La Verne would allow PBWA to pump in the Live Oak Basin	Unknown
IW1	Untreated Imported Water	Raw imported water would be purchased through TVMWD and recharged at San Antonio, Live Oak and/or Pedley spreading grounds to be pumped out of Six Basins	8,000 AFY (spreading ground limited)

In general, facility options were identified on the basis of one or more of the following factors:

- Existing facilities within close proximity to the PWR-JWL
- Existing unused facilities that have the potential to be placed back into service through refurbishment or new treatment infrastructure
- Existing facilities owned by neighboring agencies who have suggested that their facilities may be available for the project
- New facilities that augment groundwater supply to existing water treatment infrastructure that is currently operating below full treatment capacity
- New infrastructure that would allow PBWA to receive treated groundwater from existing aquifer sources in proximity to the PWR-JWL

The facility options developed are summarized in Table 2.

**Table 2: Summary of Facility Options**

Facility	City Location	New/Existing
<b>Wells</b>		
Well 3	Pomona	Existing (owned by City of Pomona)
Well 7	Pomona	Existing (owned by City of Pomona)
Well 8B	Pomona	Existing (owned by City of Pomona)
Well 20	Pomona	Existing (owned by City of Pomona)
Old Baldy Well	La Verne	Existing (owned by City of La Verne)
Cartwright Well	La Verne	Existing (owned by City of La Verne)
Dreher Well	Claremont	Existing (owned by GSWC)
Durward Well	Pomona	Existing (owned by GSWC)
Wells near Interstate 10 & Towne Ave	Pomona	New
Wells near Fulton Treatment Plant	Pomona	New
Wells near Amherst Treatment Plant	La Verne	New
<b>Conveyance</b>		
30-inch imported water pipeline from PWR-JWL to 10 & Towne treatment facility	Pomona & La Verne	Existing (owned by City of Pomona)
20-inch unused pipeline from Fulton Treatment Plant to Old Baldy	La Verne	Existing (owned by TVMWD)
16-inch to 18-inch Canon waterline (local surface raw water) from San Antonio Dam to Pedley Filtration Plant	Claremont	Existing (owned by City of Pomona)
42-inch to 60-inch PWR-JWL (imported water)	La Verne, Pomona, and Walnut	Existing (owned by PWR-JWL Commission)
Pipelines (groundwater treatment sites to 20-inch existing pipeline)	La Verne & Pomona	New
Pipelines (from existing 20-inch pipeline to PWR-JWL)	La Verne	New
<b>Booster Pump Stations</b>		
Booster Stations at well/treatment sites pumping to PWR-JWL	La Verne & Pomona	New

Facility	City Location	New/Existing
<b>Treatment</b>		
Expansion of Existing VOC-removal Air Stripping Facility at 10 & Towne	Pomona	Expansion of Existing Air Stripper (owned by City of Pomona)
Expansion of Existing VOC-removal Air Stripping Facility at 6 <sup>th</sup> & White	Pomona	Expansion of Existing Air Stripper (owned by City of La Verne)
Wellhead Treatment at Old Baldy (nitrate and perchlorate removal)	La Verne	New Treatment for Existing Well (owned by City of La Verne)
Treatment at 10 & Towne (nitrate and perchlorate removal)	Pomona	New
Treatment at Fulton (VOC, nitrate, and perchlorate removal)	Pomona	New
Use existing unused production capacity at Amherst Treatment Plant (nitrate and perchlorate removal)	La Verne	Existing (owned by City of La Verne)
Expand surface water treatment capacity at Pedley Filtration Plant and supplement local surface water feed to plant with imported raw water	Claremont	Expansion of existing filtration plant (owned by City of Pomona)

### 3 Alternatives Development

This section summarizes the process of developing alternatives that meet the Project objectives.

#### 3.1 Alternative Building Blocks

Using the supply and facility options developed in previous TMs, building blocks were developed that could be combined together to create Alternatives for this analysis. Figure 3-1 shows the various building blocks with their relative locations, facilities, yields, and underlying groundwater basins. Each of the building blocks is connected to a specific supply source. Treatment, conveyance, pumping, and recharge facilities are included where necessary.

The building blocks provide a basis for conceptual cost estimates in the following section. Building blocks that exceed the projected unit costs for imported Tier 1 MWD water will be eliminated and will not be carried into the development of alternatives.

Based on location and distance from the PWR-JWL, the following supplies and facilities were eliminated from further consideration:

- Well 20: This is an isolated well owned by City of Pomona approximately 3 miles away from the PWR-JWL.
- Dreher well: This is an isolated well owned by GSWC approximately 2.5 miles away from the PWR-JWL, and there are no other existing available facilities nearby.
- Harrison Groundwater Treatment Facility: This is a well owned by City of Pomona with a dedicated ion exchange nitrate removal facility constructed in 2008. Well 37 is located approximately 2 miles from the PWR-JWL.

#### 3.2 Conceptual Cost Estimates for Building Blocks

Conceptual cost estimates were developed for each of the building blocks. These cost estimates are based on the assumptions summarized in Table 3.



Figure 3-1: Supply and Facility Building Blocks

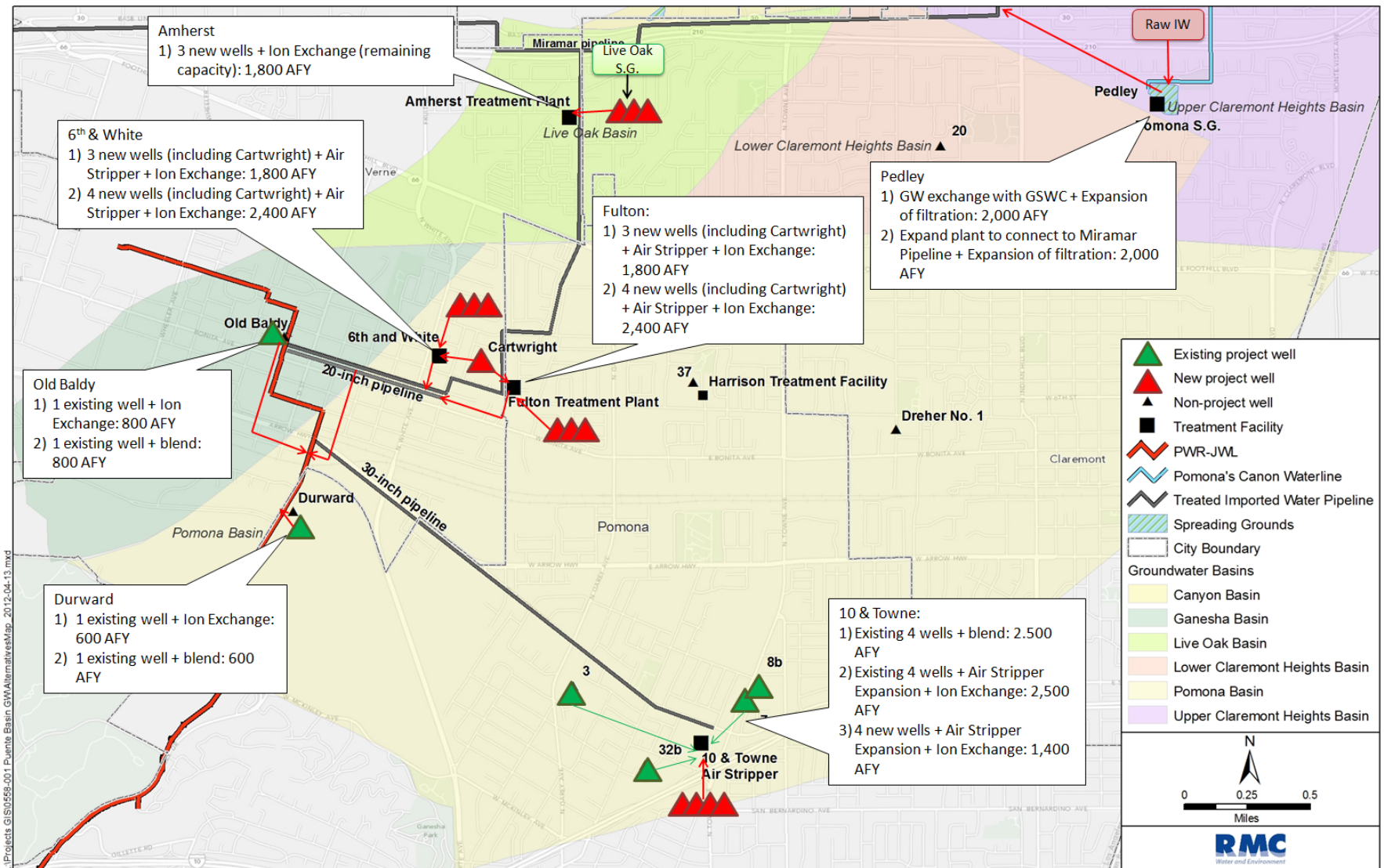


Table 3: Summary of Cost Estimate Assumptions

Item	Unit Cost	Comments
<b>Capital Costs</b>		
Pipeline	\$24/in-dia*LF for 6" and 8" diameter pipe	RMC typical planning cost benchmarks
	\$20/in-dia*LF for 10" and 12" diameter pipe	RMC typical planning cost benchmarks
	\$18/in-dia*LF for 16" and 20" diameter pipe	RMC typical planning cost benchmarks
	\$16/in-dia*LF for 24"+ diameter pipe	RMC typical planning cost benchmarks
Pump Station	$3.12 \times 10^{(0.7583 \times \log(Q \times 694.4) + 3.1951)}$ , Q = Maximum flow rate in MGD	RMC typical planning cost benchmarks
Treatment - Ion Exchange	\$2,100,000/MGD capacity	City of Chino DYY Program Expansion (December 2008), City of Pomona Perchlorate Management Feasibility Study (September 2009)
Treatment – VOC Air Stripper	\$1,100,000/MGD capacity	Remedial Investigation/Feasibility Study Report B.F. Goodrich Superfund Site Rialto, California, US EPA Region 9 (January 2010)
Well Installation Cost	\$1,500,000 lump sum	RMC typical planning cost benchmarks
Construction Cost Contingency	30% of Construction Cost Subtotal	RMC typical planning cost benchmarks
Implementation Costs	30% of Total Construction Cost	RMC typical planning cost benchmarks
<b>O&amp;M Costs (\$/yr)</b>		
Well pump maintenance	\$10,000/year (\$100,000 every 10 years)	RMC typical planning cost benchmarks
Well Redevelopment	\$10,000/year (\$100,000 every 10 years)	RMC typical planning cost benchmarks
Well lease cost (Old Baldy)	\$75,000/year	City of La Verne (August 2012) Sample Lease Agreement
Well lease cost (Cartwright)	\$25,000/year	City of La Verne (August 2012) Sample Lease Agreement
Well pumping electricity and chlorination	\$100/AF	Palmdale Integrated Water Resources Plan (March 2010)
Treatment - Ion Exchange	\$209,000/MGD capacity per year	City of Chino DYY Program Expansion (December 2008), City of Pomona Perchlorate Management Feasibility Study (September 2009)
Treatment - Air Stripper	\$7,300/MGD capacity per year	Remedial Investigation/Feasibility Study Report B.F. Goodrich Superfund Site Rialto, California, US EPA Region 9, January 2010
Pump Station	\$10,000/year	RMC typical planning cost benchmarks
Pump Station	5% of construction costs	RMC typical planning cost benchmarks
Pump Electricity Cost	\$0.12 per KW-hr	RMC typical planning cost benchmarks

Item	Unit Cost	Comments
Pipeline	\$0.60 per linear foot	RMC typical planning cost benchmarks
Brine Disposal	\$7.00 per acre-foot treated groundwater	RMC typical planning cost benchmarks
<b>Water Purchase or Lease Price (\$/af)</b>		
La Verne Rights	\$200 per AF	City of La Verne, August 2012. Sample Lease Agreement.
GSWC Rights	\$200 per AF	City of La Verne, August 2012. Sample Lease Agreement.
City of Pomona Rights	\$200 per AF	City of La Verne, August 2012. Sample Lease Agreement.
GSWC pumping rights exchange	\$775 per AF	Based on projected cost of raw imported water, Six Basins Admin. Fee, and Admin, markup for GSWC and Pomona
Raw Imported Water	\$700 per AF	Based on lifecycle unit cost from 2010-2035, and average of 5% and 7.5% increase per year
TVMWD Admin fee	\$21 per AF	Pomona Integrated Water Supply Plan, 2011
Admin fee for rights exchanges	\$18 per AF	Six Basins Watermaster 2010 Annual Report
Surplus carry-over water pool	\$18 per AF	Six Basins Administrative Assessment, 2011.
Chino Basin underflow capture	\$18 per AF	Six Basins Administrative Assessment, 2011.
<b>Electricity Usage</b>		
Pump Station	$[(Q/1.613 \cdot H)/3956] \cdot (1/0.75)$	RMC typical planning cost benchmarks
<b>Financing Costs</b>		
Lifecycle Discount Rate	5.5%	
Lifecycle Period	25 years	

It should be noted that two different assumptions are used for the escalation of MWD treated Tier 1 rates over time. The first assumption involves an annual 5 percent increase per year, and the second involves a 7.5 percent increase per year. The 5 percent escalator is based on an approximation of costs that may be necessary for the California Delta improvements. The 7.5 percent escalator is based on the average increase in MWD rates over the last forty years. Assumptions that are made about MWD rate increases have a significant impact on the cost feasibility of the alternatives developed in this analysis. The life cycle unit cost of imported water using the 5 percent escalator is \$970 per AF, and using the 7.5 percent escalator is \$1,280 per AF. The life cycle unit cost of each alternative can be compared to the projected unit cost of imported water. Conceptual cost estimates for each of the building blocks are presented in Table 4. A more detailed cost estimate appears in Appendix A.

Based on unit costs being significantly higher than imported treated Tier 1 MWD unit costs, the following building blocks were eliminated from further consideration:

- Amherst/Live Oak S.G. 1
- Pedley 1
- Pedley 2



Table 4: Conceptual Cost Estimates for Building Blocks

Building Block	Total Capital Cost (\$M)	Annualized Capital (\$/year)	Annual O&M (\$/year)	Supply Volume (AFY)	Supply Cost <sup>1</sup> (\$/AF)	Total Unit Cost (\$/AF)
<b>Site: 10 &amp; Towne</b>						
1) Use Wells 3/7/8/32 & blend Nitrate/Perchlorate	\$0.9M	\$70,000	\$460,000	2,500	\$300	\$510
2) Use Wells 3/7/8/32, expand air stripper and construct ion exchange	\$1.7M	\$130,000	\$1,110,000	2,500	\$300	\$800
3) Construct 4 new wells, expand air stripper, and construct ion exchange	\$22.6M	\$1,680,000	\$510,000	1,900	\$300	\$1,980
<b>Site: Fulton Treatment Plant</b>						
1) Construct 3 new wells and construct ion exchange and air stripper	\$19.9M	\$1,480,000	\$570,000	1,400	\$300	\$1,760
2) Construct 4 new wells and construct ion exchange and air stripper	\$27.2M	\$1,970,000	\$780,000	2,200	\$300	\$1,580
<b>Site: 6<sup>th</sup> and White Treatment Plant</b>						
1) Construct 3 new wells and construct ion exchange and expand air stripper	\$19.9M	\$1,780,000	\$570,000	1,400	\$300	\$1,760
2) Construct 4 new wells and construct ion exchange and expand air stripper	\$27.2M	\$2,030,000	\$770,000	2,200	\$300	\$1,570
<b>Site: Old Baldy well</b>						
1) Use Old Baldy well and construct ion exchange	\$5.2M	\$390,000	\$350,000	800	\$300	\$1,230
2) Use Old Baldy well and blend Nitrate/Perchlorate	\$1.7M	\$130,000	\$140,000	800	\$300	\$640
<b>Site: Durward well</b>						
1) Use Durward well and construct ion exchange	\$3.4M	\$250,000	\$240,000	600	\$300	\$1,120
2) Use Durward well and blend Nitrate/Perchlorate	\$0.5M	\$90,000	\$100,000	600	\$300	\$620
<b>Site: Amherst/Live Oak Spreading Ground</b>						
1) Construct 3 new wells and use existing ion exchange treatment capacity	\$18.5M	\$1,380,000	\$530,000	1,400	\$720	\$2,080
<b>Site: Pedley Filtration Plant</b>						
1) Expand existing plant, construct raw imported water pipeline, exchange with GSWC	\$25.4M	\$1,890,000	\$280,000	2,000	\$775	\$1,870

Building Block	Total Capital Cost (\$M)	Annualized Capital (\$/year)	Annual O&M (\$/year)	Supply Volume (AFY)	Supply Cost <sup>1</sup> (\$/AF)	Total Unit Cost (\$/AF)
2) Expand existing plant, construct raw imported water pipeline, build treated water pipeline to Miramar pipeline	\$25.4M	\$1,890,000	\$280,000	2,000	\$721	\$1,810
<b>Site: New well</b>						
1) Construct new well and ion exchange	\$6.0M	\$450,000	\$230,000	600	\$300	\$1,430
2) Construct new well and blend Nitrate/Perchlorate	\$3.0M	\$220,000	\$70,000	600	\$300	\$780

1. The supply unit cost for groundwater was assumed to match the cost of supply stated in the La Verne sample lease (\$300). Imported water was assumed to be \$775 which includes \$700 for purchase of raw water, \$21 TVMWD fees, \$18 Six Basin assessment fee, \$18 admin fee for Pomona’s Pedley Filtration Plan treatment, and \$18 admin fee for exchanges with GSWC.

### 3.3 Development of Six Alternatives

#### 3.3.1 Decision Tree

To assemble building blocks into alternatives, a decision tree was created according to five key decisions:

1. Decision: Will blending technology or treatment be used to achieve water quality objectives?
2. Decision: Will there be a single-agency partnership or a multiple-agency partnership?
3. Decision: Which agency or agencies will become partners?
4. Decision: Where will the primary facilities be centralized?
5. Decision: Which wells will be used?

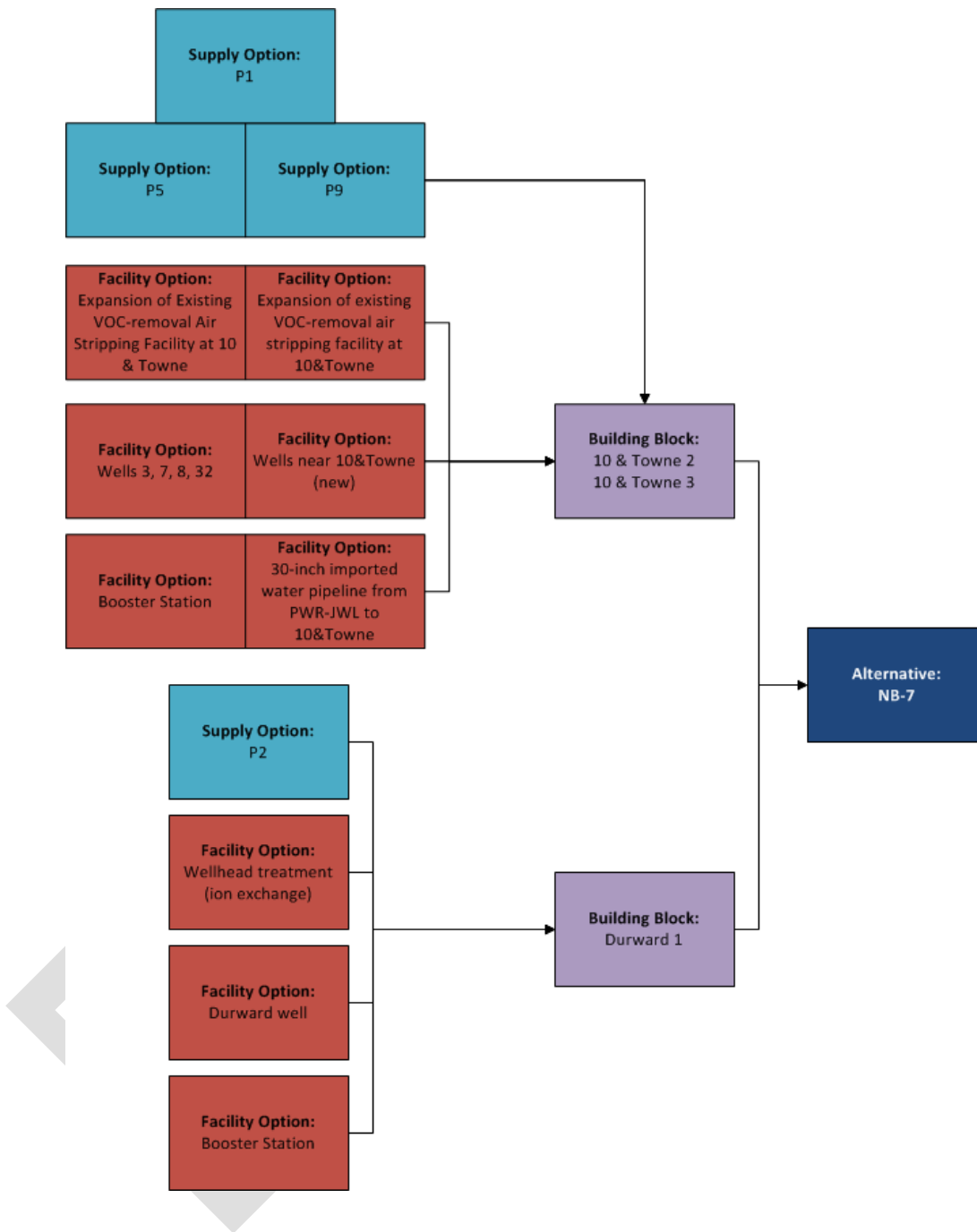
An example of how the alternatives were ultimately created is shown in Figure 3-2.

Nine non-blending and ten blending alternatives were developed using this process, as shown in Figure 3-3 and Figure 3-4. Most of these alternatives have yields of 5,000 AFY, but a few of them have yields of less than 5,000 AFY. The purpose of showing the lower yield alternatives is to emphasize that PBWA has the option to pursue a project or an initial project phase with a yield less than 5,000 AFY. However, for the sake of a consistent build-out comparison between alternatives, only 5,000 AFY alternatives were carried forward in the alternatives analysis. Furthermore, the low-yield alternatives are already duplicated as components of other 5,000 AFY alternatives. The following low-yield alternatives were eliminated:

- B-1 - BLEND - Single-Agency Partnership w/La Verne, 6th & White
- B-2 - BLEND - Single-Agency Partnership w/La Verne, Fulton
- B-3 BLEND - Single-Agency Partnership w/Pomona, 10&Towne (no expansion)
- B-8 BLEND – Multi-Agency Partnership w/ Pomona & GSWC, 10&Towne (no expansion)
- NB-1 - NON-BLEND - Single-Agency Partnership w/La Verne, 6th & White
- NB-2 - NON-BLEND - Single-Agency Partnership w/La Verne, Fulton

It is important to note that the lower-yield alternatives that were eliminated above are still components of remaining alternatives with yields of 5,000 AFY. PBWA still has the option of pursuing these projects as individual components of the selected alternative. This is consistent with PBWA’s expressed interest in the possibility of phasing the project with an initial phase yield less than 5,000 AFY.

Figure 3-2: Example of Development of Alternative NB-7 from Options and Building Blocks



### 3.3.2 Final Cost Screening of Alternatives

The remaining thirteen alternatives from the Decision Tree step are summarized in Table 5. The table describes the partnerships, supplies, and facilities (existing and new) that would be required for each alternative. With the exception of one alternative, the alternatives listed below result in 5,000 AFY of supply for PBWA only. The exception involves 5,000 AFY of supply for PBWA, with additional supply dedicated to City of Pomona at a new Regional Treatment Plant at 10&Towne. Alternatives that result in a yield of less than 5,000 AFY are eliminated from further consideration as stand-alone alternatives.

Figure 3-3: Alternatives Decision Tree for Blending Alternatives

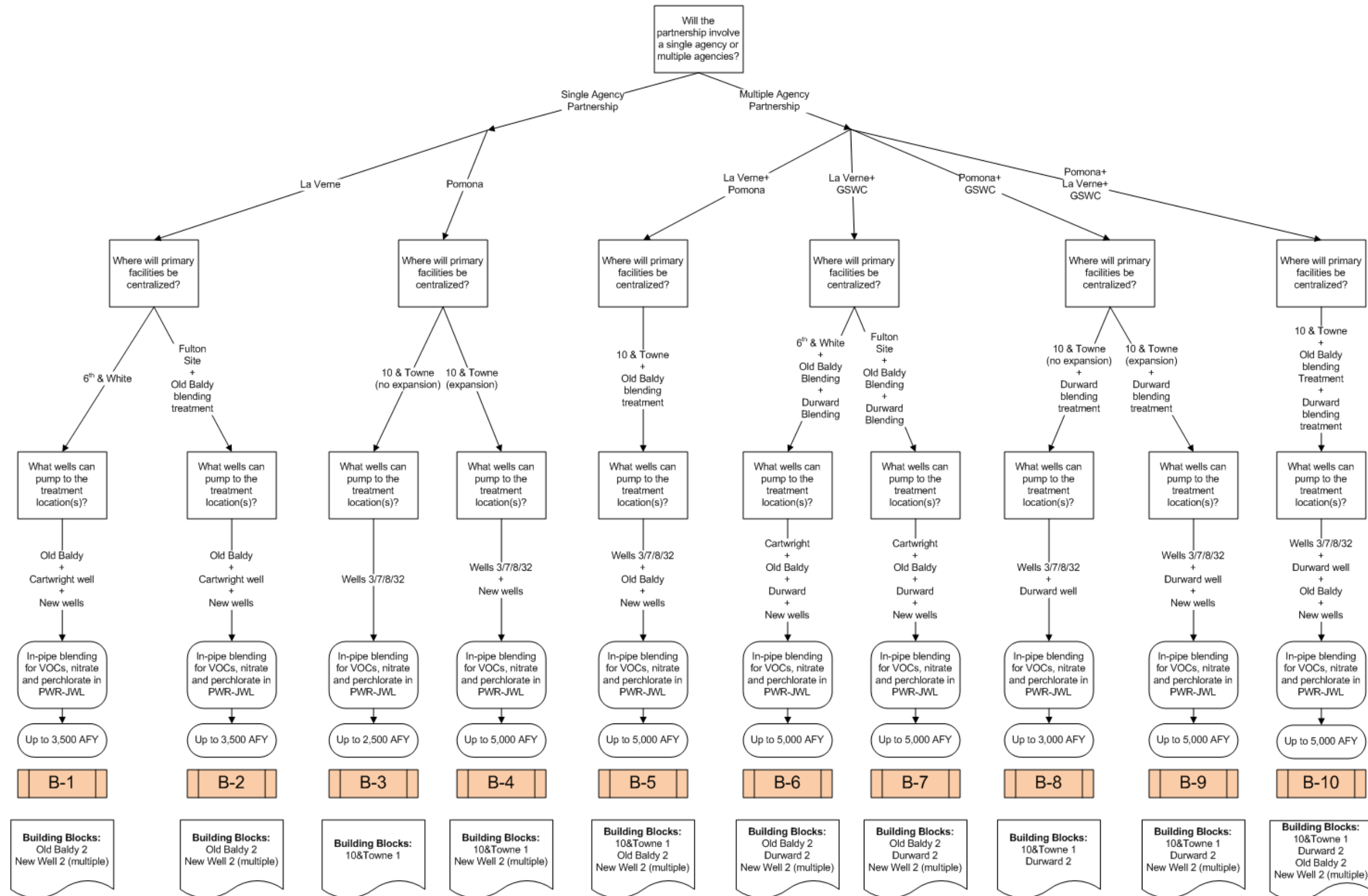


Figure 3-4: Alternatives Decision Tree for Non-Blending Alternatives

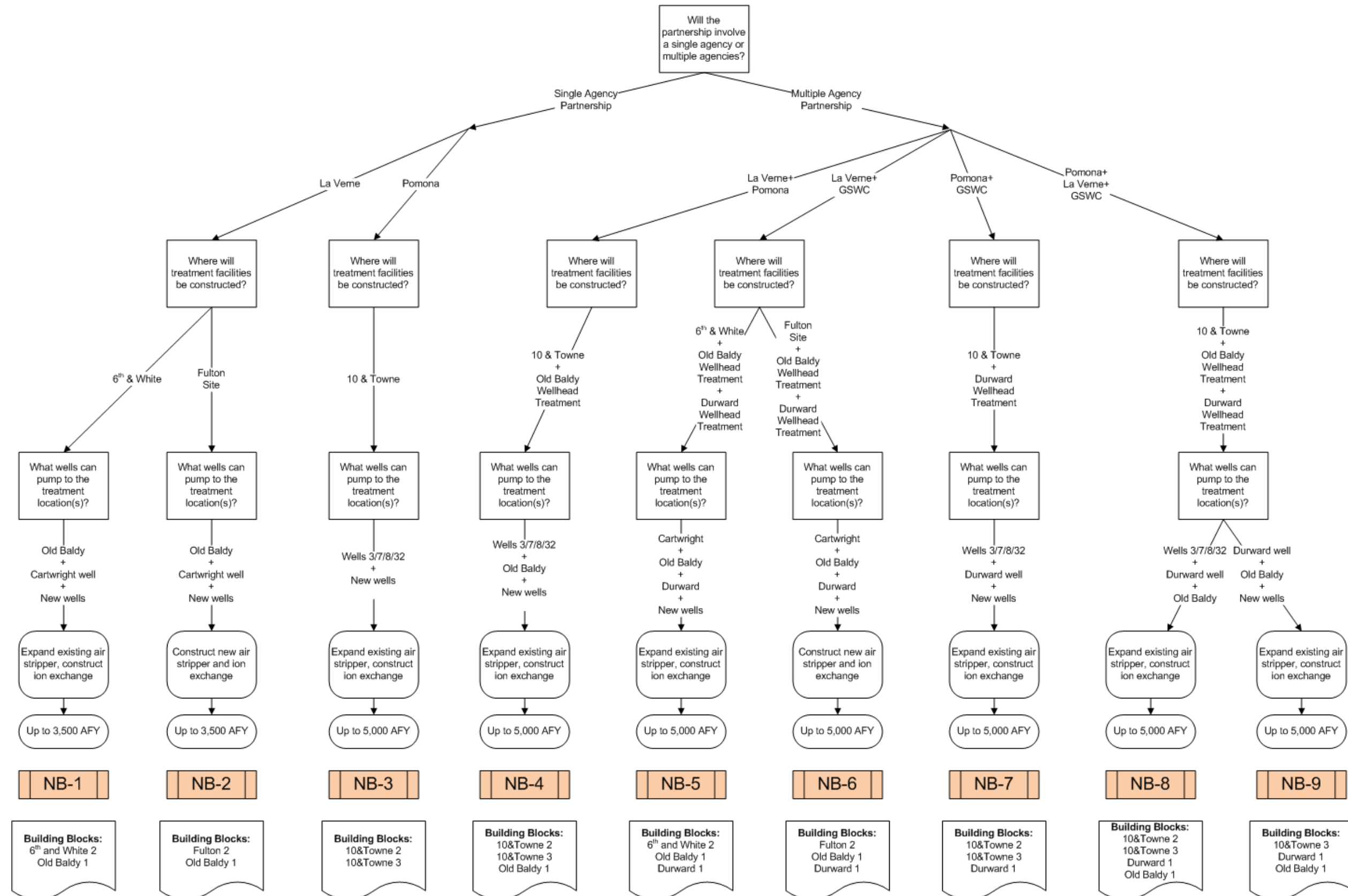


Table 5: Summary of Alternatives

Alt.	Facilities	Supplies
<p><b>B-4</b> Blend <i>Pomona</i></p>	<ul style="list-style-type: none"> <li>• Site: 10 &amp; Towne</li> <li>• Wells: 3, 7, 8, 32, 4 new wells</li> <li>• Pipelines: Existing 30" line from 10 &amp; Towne to PWR-JWL; 4 new 8" pipelines from new wells to 10 &amp; Towne</li> <li>• Pump Stations: 1 new pump station at 10 &amp; Towne (6.3 MGD)</li> <li>• Assumes at least 16,600 AFY of imported water purchased for PWR-JWL</li> </ul>	<ul style="list-style-type: none"> <li>• Lease City of Pomona Four Basins Rights while Pomona uses Chino rights (2,000 AFY)</li> <li>• Lease City of La Verne Four Basins Rights (400 AFY)</li> <li>• Lease GSWC Four Basins Rights (600 AFY)</li> <li>• New surplus carryover pool rights from Six Basins (2,000 AFY)</li> </ul>
<p><b>B-5</b> Blend <i>La Verne + Pomona</i></p>	<ul style="list-style-type: none"> <li>• Site: 10 &amp; Towne</li> <li>• Wells: 3, 7, 8, 32, Old Baldy, 3 new wells</li> <li>• Pipelines: Existing 30" line from 10 &amp; Towne to PWR-JWL; 3 new 8" pipelines from new wells to 10 &amp; Towne; new pipeline from Old Baldy to abandoned 20" line, new pipeline from 20" line to PWR-JWL</li> <li>• Pump Stations: 1 new pump station at 10 &amp; Towne (5.3 MGD); 1 new pump station at Old Baldy (1.0 MGD)</li> <li>• Assumes at least 13,800 AFY of imported water purchased for PWR-JWL</li> </ul>	<ul style="list-style-type: none"> <li>• Lease City of Pomona Four Basins Rights while Pomona uses Chino rights (2,000 AFY)</li> <li>• Lease City of La Verne Four Basins Rights (400 AFY)</li> <li>• Lease City of La Verne Two Basins Rights (800 AFY)</li> <li>• Lease GSWC Four Basins Rights (600 AFY)</li> <li>• New surplus carryover pool rights from Six Basins (1,200 AFY)</li> </ul>
<p><b>B-6</b> Blend <i>La Verne + GSWC</i></p>	<ul style="list-style-type: none"> <li>• Site: 6th and White Treatment Facility</li> <li>• Wells: Old Baldy, Durward, 6 new wells (including Cartwright)</li> <li>• Pipelines: 6 new pipelines from new wells to 6th and White; New pipeline from Old Baldy to 20" pipeline; New pipeline from 6th and White to 20"; New pipeline from 20" pipeline to PWR-JWL downstream of Pomona's connection; New pipeline from Durward to PWR-JWL</li> <li>• Pump Stations: 1 new pump station at 6th and White at 4.5 MGD; 1 new pump station at Old Baldy at 1.0 MGD; 1 new pump at Durward at 0.8 MGD</li> <li>• Assumes at least 14,200 AFY of imported water purchased for PWR-JWL</li> </ul>	<ul style="list-style-type: none"> <li>• Lease City of La Verne Four Basins Rights (400 AFY)</li> <li>• Lease City of La Verne Two Basins Rights (800 AFY)</li> <li>• Lease GSWC Four Basins Rights (600 AFY)</li> <li>• New surplus carryover pool rights from Six Basins (3,200 AFY)</li> </ul>



Alt.	Facilities	Supplies
<p><b>B-7</b> Blend <i>La Verne + GSWC</i></p>	<ul style="list-style-type: none"> <li>• Site: Fulton</li> <li>• Wells: Old Baldy, Durward, 6 new wells (including Cartwright)</li> <li>• Pipelines: 6 new pipelines from new wells to Fulton; New pipeline from Old Baldy to 20" pipeline; New pipeline from Fulton to 20"; New pipeline from 20" pipeline to PWR-JWL downstream of Pomona's connection; New pipeline from Durward to PWR-JWL</li> <li>• Pump Stations: 1 new pump station at 6th and White at 4.5 MGD; 1 new pump station at Old Baldy at 1.0 MGD; 1 new pump at Durward at 0.8 MGD</li> <li>• Assumes at least 6,300 AFY of imported water purchased for PWR-JWL</li> </ul>	<ul style="list-style-type: none"> <li>• Lease City of La Verne Four Basins Rights (400 AFY)</li> <li>• Lease City of La Verne Two Basins Rights (800 AFY)</li> <li>• Lease GSWC Four Basins Rights (600 AFY)</li> <li>• New surplus carryover pool rights from Six Basins (3,200 AFY)</li> </ul>
<p><b>B-9</b> Blend <i>Pomona + GSWC</i></p>	<ul style="list-style-type: none"> <li>• Site: 10 &amp; Towne</li> <li>• Wells: 3, 7, 8, 32, Durward, 3 new wells</li> <li>• Pipelines: Existing 30" line from 10 &amp; Towne to PWR-JWL; 3 new 8" pipelines from new wells to 10 &amp; Towne; New pipeline from Durward to PWR-JWL</li> <li>• Pump Stations: 1 new pump station at 10 &amp; Towne (5.5 MGD); 1 new pump station at Durward (0.8 MGD)</li> <li>• Assumes at least 14,600 AFY of imported water purchased for PWR-JWL</li> </ul>	<ul style="list-style-type: none"> <li>• Lease City of Pomona Four Basins Rights (Pomona uses Chino rights instead) at 2,000 AFY</li> <li>• Lease City of La Verne Four Basins Rights 400 AFY</li> <li>• Lease GSWC Four Basins Rights at 600 AFY</li> <li>• New surplus carryover pool rights from Six Basins at 2,000 AFY</li> </ul>
<p><b>B-10</b> Blend <i>Pomona + La Verne + GSWC</i></p>	<ul style="list-style-type: none"> <li>• Site: 10 &amp; Towne</li> <li>• Wells: 3, 7, 8, 32, Old Baldy, Durward, 2 new wells</li> <li>• Pipelines: Existing 30" line from 10 &amp; Towne to PWR-JWL; 2 new 8" pipelines from new wells to 10 &amp; Towne; New pipeline from Durward to PWR-JWL; New pipeline from Old Baldy to PWR-JWL</li> <li>• Pump Stations: 1 new pump station at 10 &amp; Towne (5.5 MGD); 1 new pump station at Durward (0.8 MGD); 1 new pump station at Old Baldy (1.0 MGD)</li> <li>• Assumes at least 11,700 AFY of imported water purchased for PWR-JWL</li> </ul>	<ul style="list-style-type: none"> <li>• Lease City of Pomona Four Basins Rights while Pomona uses Chino rights (2,000 AFY)</li> <li>• Lease City of La Verne Four Basins Rights (400 AFY)</li> <li>• Lease City of La Verne Two Basins Rights (800 AFY)</li> <li>• Lease GSWC Four Basins Rights (600 AFY)</li> <li>• New surplus carryover pool rights from Six Basins (1,400 AFY)</li> </ul>

Alt.	Facilities	Supplies
<p><b>NB-3</b> Non-Blend <i>Pomona</i></p>	<ul style="list-style-type: none"> <li>• Site: 10 &amp; Towne</li> <li>• Wells: 3, 7, 8, 32, 4 new wells</li> <li>• Pipelines: Existing 30" line from 10 &amp; Towne to PWR-JWL; 4 new 8" pipelines from new wells to 10 &amp; Towne</li> <li>• Pump Stations: 1 new pump station at 10 &amp; Towne (6.3 MGD)</li> <li>• Treatment: Lease Pomona's 3.1 MGD air stripper at 10 &amp; Towne and expand by 3.2 MGD; New ion exchange plant at 10 &amp; Towne (6.3 MGD)<sup>1</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Lease City of Pomona Four Basins Rights while Pomona uses Chino rights (2,000 AFY)</li> <li>• Lease City of La Verne Four Basins Rights (400 AFY)</li> <li>• Lease GSWC Four Basins Rights (600 AFY)</li> <li>• New surplus carryover pool rights from Six Basins (2,000 AFY)</li> </ul>
<p><b>NB-4</b> Non-Blend <i>Pomona + La Verne</i></p>	<ul style="list-style-type: none"> <li>• Site: 10 &amp; Towne</li> <li>• Wells: 3, 7, 8, 32, Old Baldy, 3 new wells</li> <li>• Pipelines: Existing 30" line from 10 &amp; Towne to PWR-JWL; 3 new 8" pipelines from new wells to 10 &amp; Towne; Existing pipelines from Old Baldy to PWR-JWL</li> <li>• Pump Stations: 1 new pump station at 10 &amp; Towne (5.3 MGD); 1 new pump station at Old Baldy (1.0 MGD)</li> <li>• Treatment: Lease Pomona's 3.1 MGD air stripper at 10 &amp; Towne and expand by 2.2 MGD; New ion exchange plant at 10 &amp; Towne (6.3 MGD)<sup>1</sup>; New ion exchange plant at Old Baldy (1.0 MGD)<sup>1</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Lease City of Pomona Four Basins Rights while Pomona uses Chino rights (2,000 AFY)</li> <li>• Lease City of La Verne Four Basins Rights (400 AFY)</li> <li>• Lease City of La Verne Two Basins Rights (800 AFY)</li> <li>• Lease GSWC Four Basins Rights (600 AFY)</li> <li>• New surplus carryover pool rights from Six Basins (1,200 AFY)</li> </ul>
<p><b>NB-5</b> Non-Blend <i>La Verne + GSWC</i></p>	<ul style="list-style-type: none"> <li>• Site: 6th and White Treatment Facility</li> <li>• Wells: Old Baldy, Durward, 6 new wells (including Cartwright)</li> <li>• Pipelines: 6 new 8" pipelines from new wells to 6th and White; Existing pipelines from Old Baldy to PWR-JWL; New pipeline from 6th and White to 20"; New pipeline from 20" pipeline to PWR-JWL downstream of Pomona's connection; New pipeline from Durward to PWR-JWL</li> <li>• Pump Stations: 1 new pump station at 6th and White at 4.5 MGD; 1 new pump station at Old Baldy at 1.0 MGD; 1 new pump at Durward at 0.8 MGD</li> <li>• Treatment: Expand air stripper at 6<sup>th</sup> and White by 4.5 MGD; New ion exchange plant at 6<sup>th</sup> and White (4.5 MGD)<sup>1</sup>; Ion exchange plant at Old Baldy (1.0 MGD)<sup>1</sup>; Ion exchange plant at Durward (0.8 MGD)</li> </ul>	<ul style="list-style-type: none"> <li>• Lease City of La Verne Four Basins Rights (400 AFY)</li> <li>• Lease City of La Verne Two Basins Rights (800 AFY)</li> <li>• Lease GSWC Four Basins Rights (600 AFY)</li> <li>• New surplus carryover pool rights from Six Basins (3,200 AFY)</li> </ul>



Alt.	Facilities	Supplies
<p><b>NB-6</b> Non-Blend <i>La Verne + GSWC</i></p>	<ul style="list-style-type: none"> <li>• Site: Fulton</li> <li>• Wells: Old Baldy, Durward, 6 new wells (including Cartwright)</li> <li>• Pipelines: 6 new pipelines from new wells to Fulton; Existing pipeline from Old Baldy to PWR-JWL; New pipeline from Fulton to 20"; New pipeline from 20" pipeline to PWR-JWL downstream of Pomona's connection; New pipeline from Durward to PWR-JWL</li> <li>• Pump Stations: 1 new pump station at 6th and White at 4.5 MGD; 1 new pump station at Old Baldy at 1.0 MGD; 1 new pump at Durward at 0.8 MGD</li> <li>• Treatment: Expand air stripper at 6<sup>th</sup> and White by 4.5 MGD; New ion exchange plant at 6<sup>th</sup> and White (4.5 MGD)<sup>1</sup>; Ion exchange plant at Old Baldy (1.0 MGD)<sup>1</sup>; Ion exchange plant at Durward (0.8 MGD)</li> </ul>	<ul style="list-style-type: none"> <li>• Lease City of La Verne Four Basins Rights (400 AFY)</li> <li>• Lease City of La Verne Two Basins Rights (800 AFY)</li> <li>• Lease GSWC Four Basins Rights (600 AFY)</li> <li>• New surplus carryover pool rights from Six Basins (3,200 AFY)</li> </ul>
<p><b>NB-7</b> Non-Blend <i>Partnership: Pomona + GSWC</i></p>	<ul style="list-style-type: none"> <li>• Site: 10 &amp; Towne</li> <li>• Wells: 3, 7, 8, 32, Durward, 3 new wells</li> <li>• Pipelines: Existing 30" line from 10 &amp; Towne to PWR-JWL; 3 new 8" pipelines from new wells to 10 &amp; Towne; New pipeline from Durward to PWR-JWL</li> <li>• Pump Stations: 1 new pump station at 10 &amp; Towne (5.5 MGD); 1 new pump station at Durward (0.8 MGD)</li> <li>• Treatment: Lease Pomona's 3.1 MGD air stripper at 10 &amp; Towne and expand by 2.4 MGD; New ion exchange plant at 10 &amp; Towne (5.5 MGD)<sup>1</sup>; New ion exchange at Durward (0.8 MGD)</li> </ul>	<ul style="list-style-type: none"> <li>• Lease City of Pomona Four Basins Rights (Pomona uses Chino rights instead) at 2,000 AFY</li> <li>• Lease City of La Verne Four Basins Rights 400 AFY</li> <li>• Lease GSWC Four Basins Rights at 600 AFY</li> <li>• New surplus carryover pool rights from Six Basins at 2,000 AFY</li> </ul>

Alt.	Facilities	Supplies
<p><b>NB-8</b> Non-Blend <i>Partnership: Pomona + La Verne + GSWC</i></p>	<ul style="list-style-type: none"> <li>• Site: 10 &amp; Towne</li> <li>• Wells: 3, 7, 8, 32, Old Baldy, Durward, 2 new wells</li> <li>• Pipelines: Existing 30" line from 10 &amp; Towne to PWR-JWL; 2 new 8" pipelines from new wells to 10 &amp; Towne; New pipeline from Durward to PWR-JWL; Existing pipeline from Old Baldy to PWR-JWL</li> <li>• Pump Stations: 1 new pump station at 10 &amp; Towne (5.5 MGD); 1 new pump station at Durward (0.8 MGD); 1 new pump station at Old Baldy (1.0 MGD)</li> <li>• Treatment: Treatment: Lease Pomona's 3.1 MGD air stripper at 10 &amp; Towne and expand by 1.4 MGD; New ion exchange plant at 10 &amp; Towne (4.5 MGD)<sup>1</sup>; New ion exchange at Durward (0.8 MGD); New ion exchange at Old Baldy (1.0 MGD)<sup>1</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Lease City of Pomona Four Basins Rights while Pomona uses Chino rights (2,000 AFY)</li> <li>• Lease City of La Verne Four Basins Rights (400 AFY)</li> <li>• Lease City of La Verne Two Basins Rights (800 AFY)</li> <li>• Lease GSWC Four Basins Rights (600 AFY)</li> <li>• New surplus carryover pool rights from Six Basins (1,400 AFY)</li> </ul>
<p><b>NB-9</b> Non-Blend <i>Partnership: Pomona + La Verne + GSWC</i></p>	<ul style="list-style-type: none"> <li>• Site: 10 &amp; Towne</li> <li>• Wells: Old Baldy, Durward, 4 new wells</li> <li>• Pipelines: Existing 30" line from 10 &amp; Towne to PWR-JWL; 4 new 8" pipelines from new wells to 10 &amp; Towne; New pipeline from Durward to PWR-JWL; Existing pipeline from Old Baldy to PWR-JWL</li> <li>• Pump Stations: 1 new pump station at 10 &amp; Towne (5.5 MGD); 1 new pump station at Durward (0.8 MGD); 1 new pump station at Old Baldy (1.0 MGD)</li> <li>• Treatment: Treatment: Lease Pomona's 3.1 MGD air stripper at 10 &amp; Towne and expand by 1.4 MGD; New ion exchange plant at 10 &amp; Towne (4.5 MGD)<sup>1</sup>; New ion exchange at Durward (0.8 MGD); New ion exchange at Old Baldy (1.0 MGD)<sup>1</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Lease City of La Verne Four Basins Rights (400 AFY)</li> <li>• Lease City of La Verne Two Basins Rights (800 AFY)</li> <li>• Lease GSWC Four Basins Rights (600 AFY)</li> <li>• New surplus carryover pool rights from Six Basins (3,200 AFY)</li> </ul>

1. Ion exchange assumes separate treatment trains for nitrate removal and perchlorate removal, arranged in series.

Figure 3-5 through Figure 3-10 show the locations and characteristics of each of the remaining alternatives.

Figure 3-5: Alternatives Involving Single Agency Partnership with Pomona  
(B-4, NB-3)

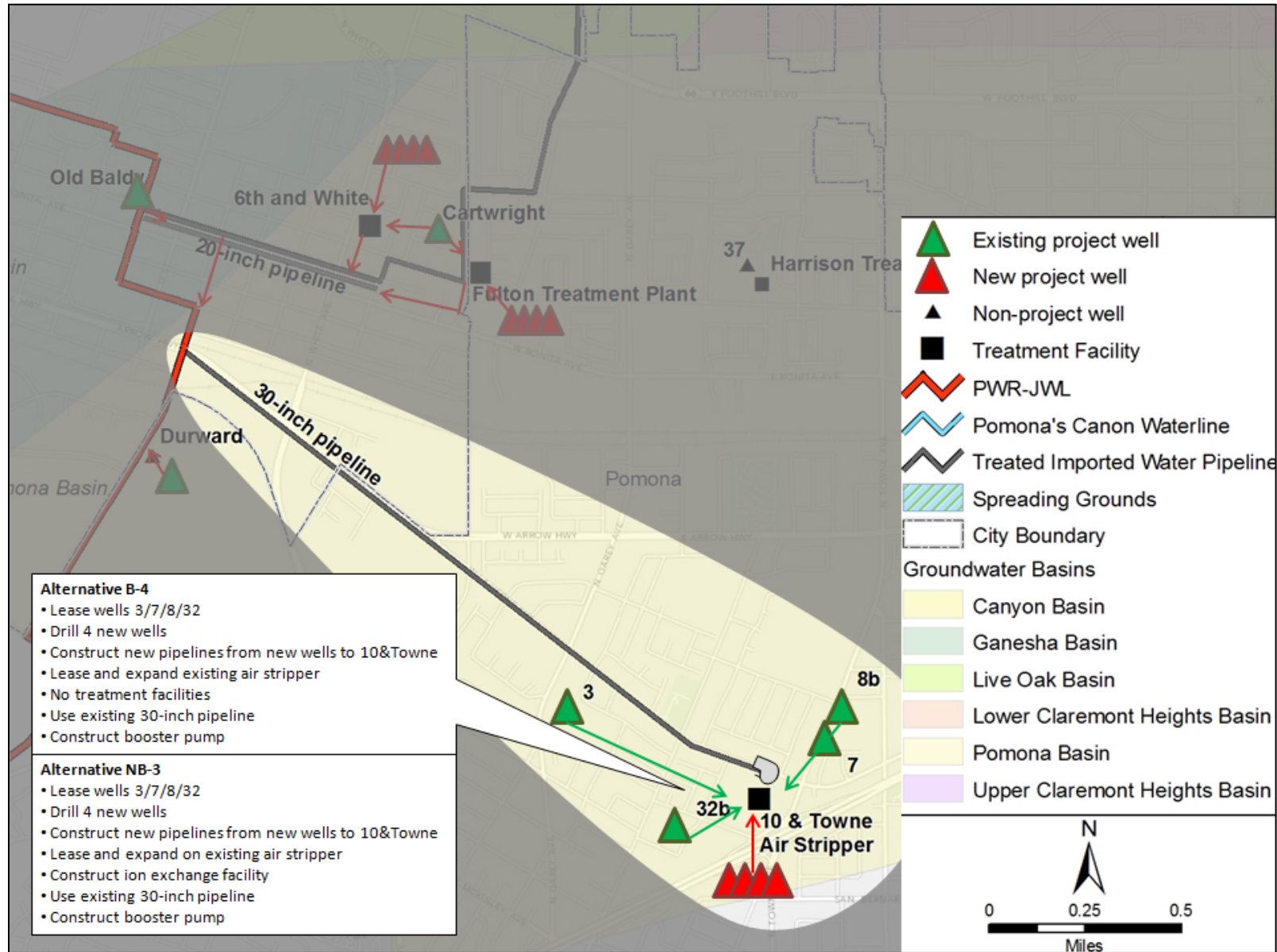


Figure 3-6: Alternatives Involving Multi-Agency Partnership with Pomona and La Verne  
(B-5, NB-4)

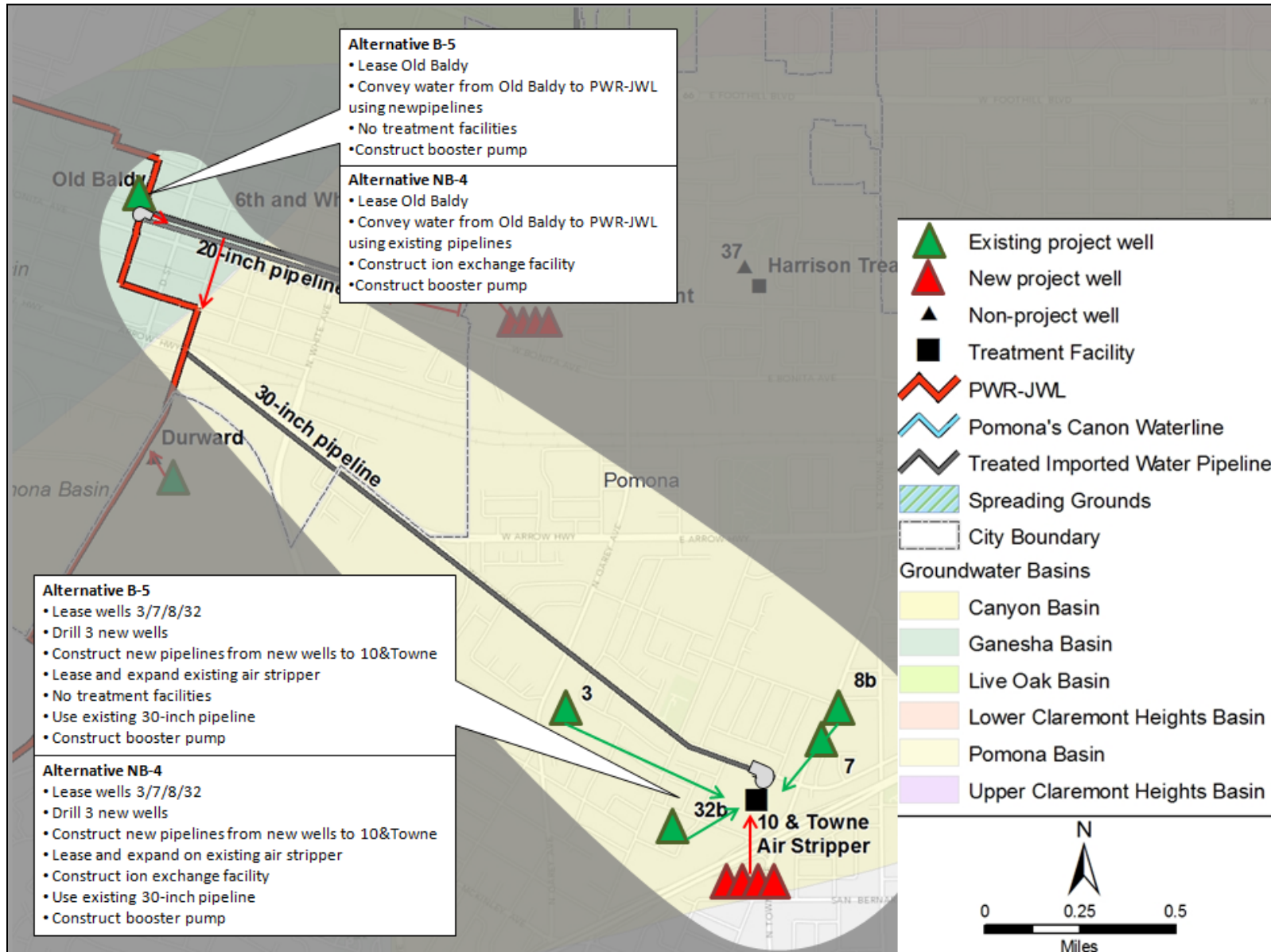


Figure 3-7: Alternatives Involving Multi-Agency Partnership with Pomona and GSWC  
 (B-9, NB-7)

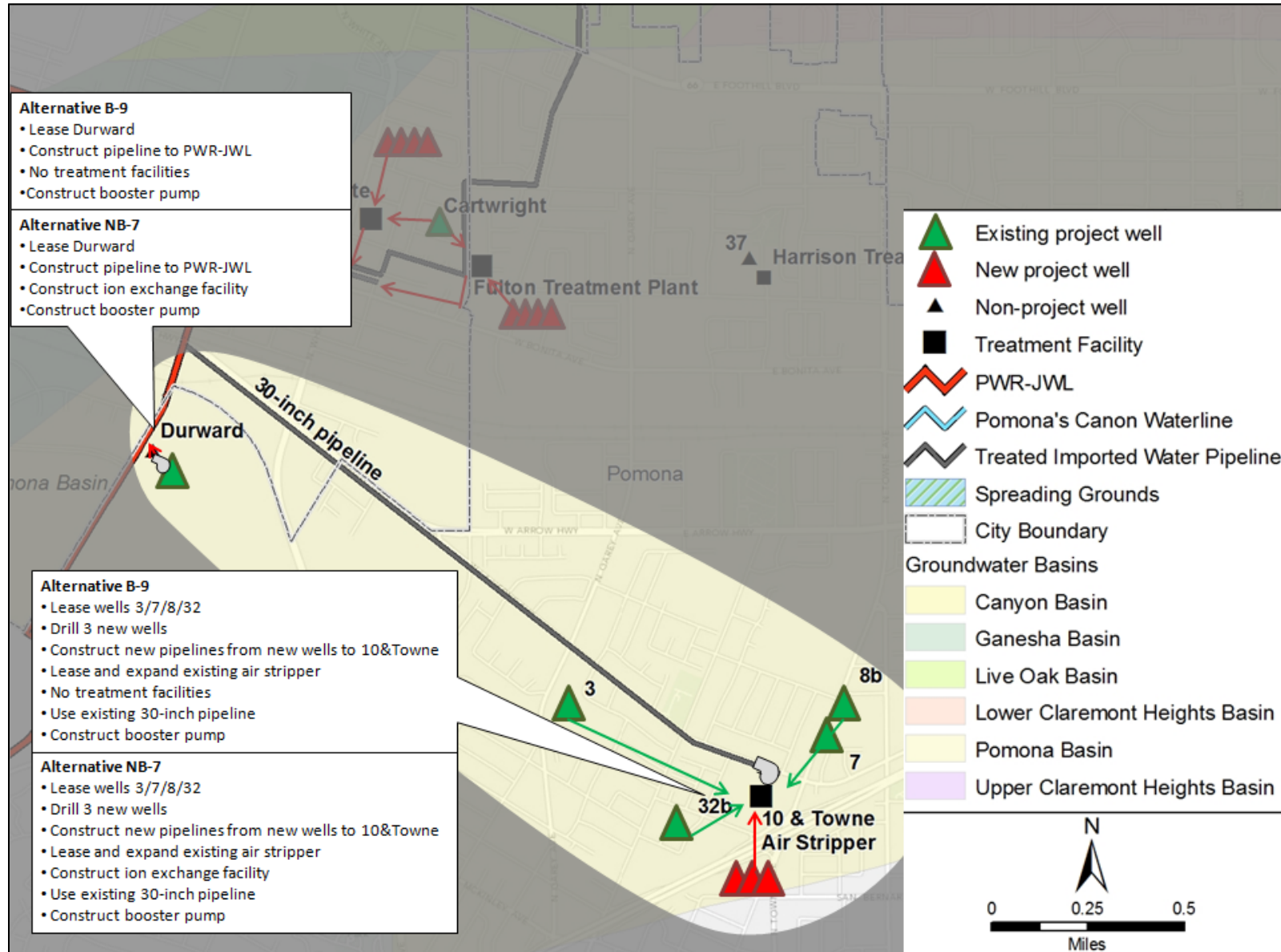




Figure 3-8: Alternatives Involving Multi-Agency Partnership with La Verne and GSWC – 6<sup>th</sup> & White (B-6, NB-5)

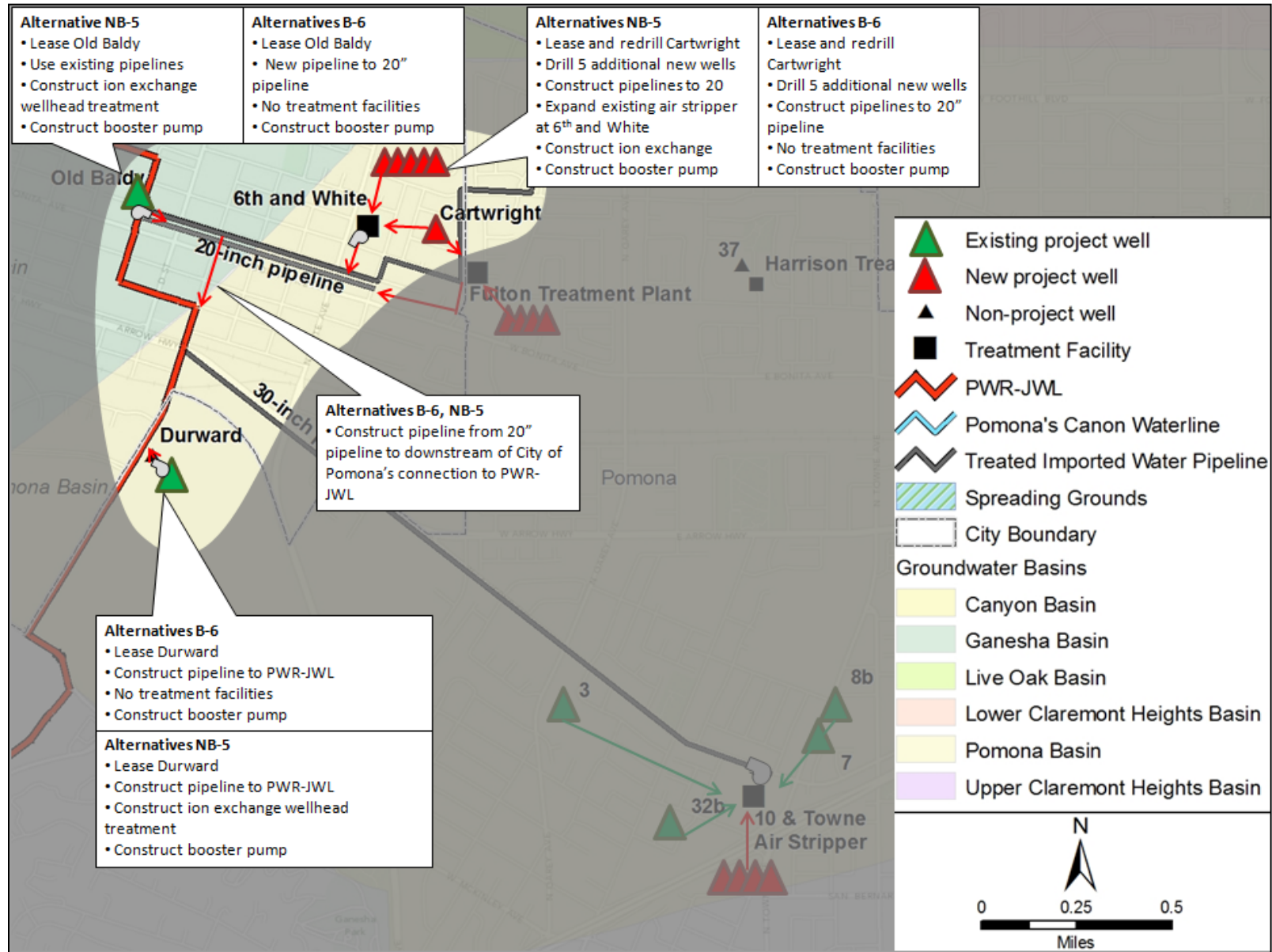


Figure 3-9: Alternatives Involving Multi-Agency Partnership with La Verne and GSWC – Fulton  
 (B-7, NB-6)

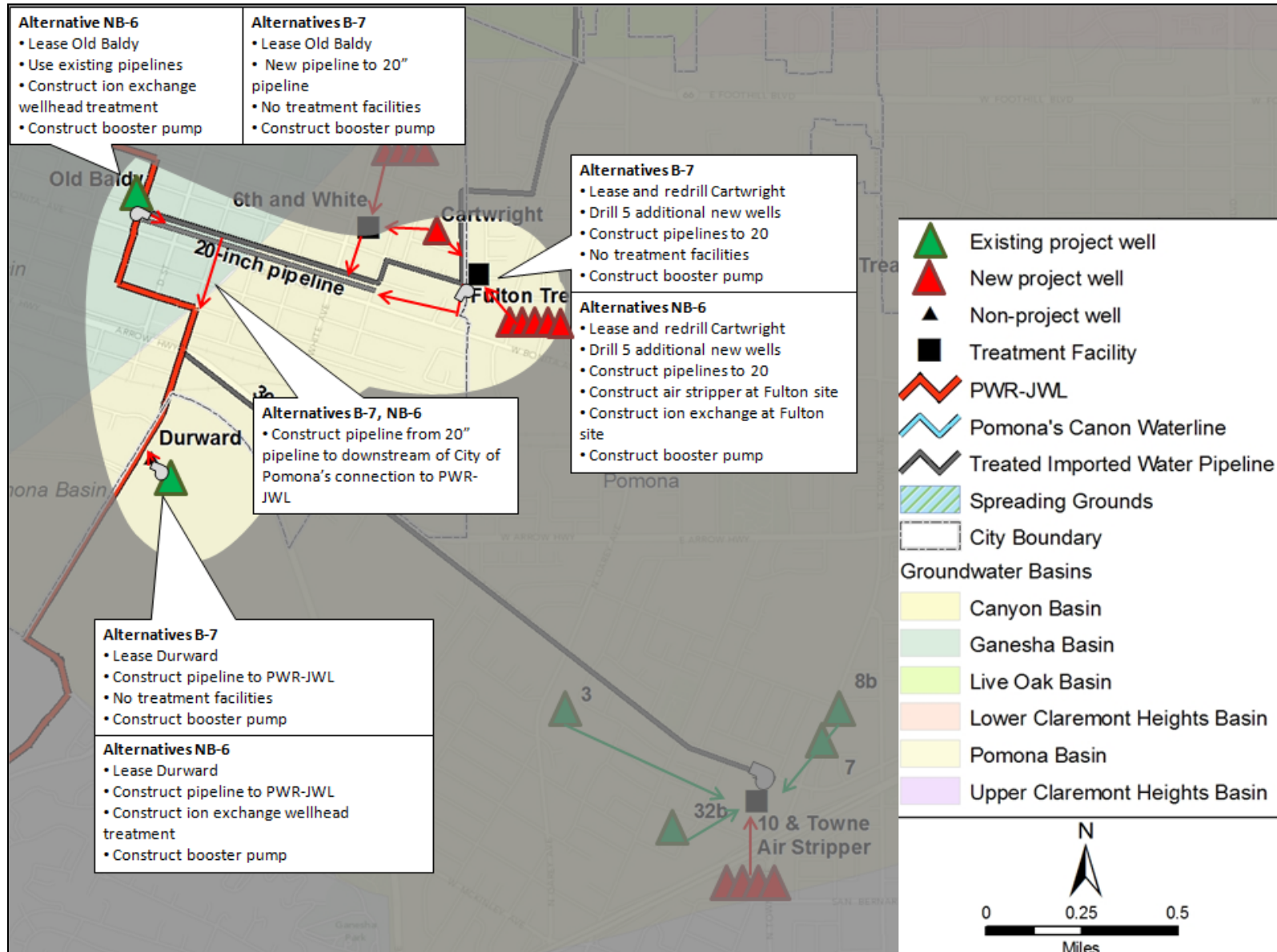
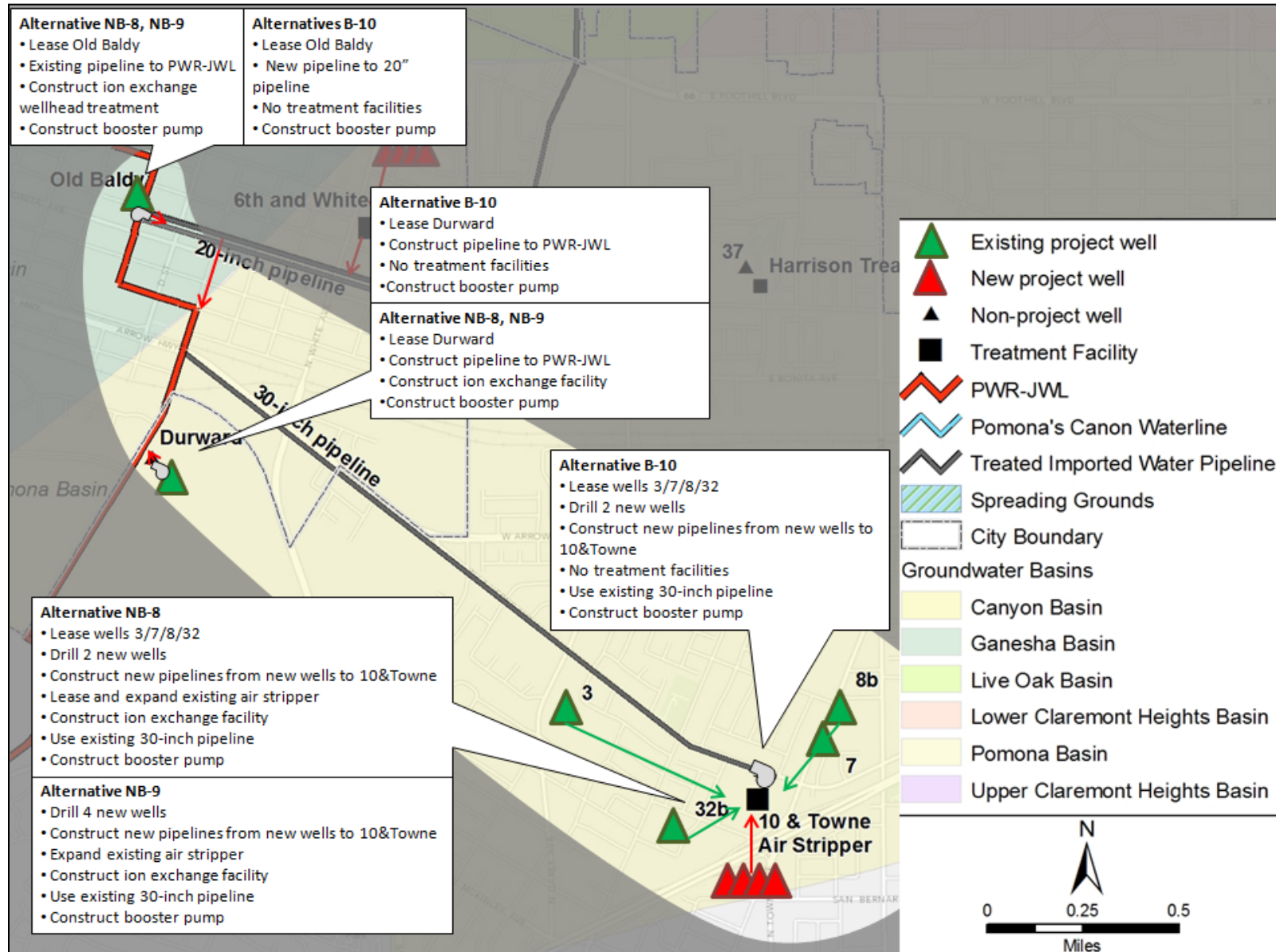


Figure 3-10: Alternatives Involving Multi-Agency Partnership with Pomona, La Verne and GSWC  
(B-10, NB-8, NB-9)





Finally, a cost estimate is calculated for each of the remaining thirteen alternatives. The same cost assumptions shown in Table 3 above are used. The cost estimates are summarized in Table 6.

**Table 6: Cost Estimates for Alternatives**

Alt. No.	Alternative Description	Total Unit Cost (\$/AF)	Considered Further?
B-4	Blending: Pomona Partnership (10&Towne Expansion + 3/7/8/32 + 4 new wells)	\$590	Yes
B-5	Blending: Pomona + La Verne Partnership (10&Towne Expansion + 3/7/8/32 + Old Baldy + 3 new wells)	\$600	Yes
B-6	Blending: La Verne + GSWC (6th &White + Old Baldy + Durward + 6 new wells, including Cartwright)	\$640	No
B-7	Blending: La Verne + GSWC (Fulton + Old Baldy + Durward + 6 new wells, including Cartwright)	\$730	No
B-9	Blending: Pomona + GSWC (10&Towne Expansion + 3/7/8/32 + Durward + 3 new wells)	\$550	Yes
B-10	Blending: Pomona + GSWC + La Verne (10&Towne Expansion + 3/7/8/32 + Durward + Old Baldy + 2 new wells)	\$580	Yes
NB-3	Non-Blending: Pomona Partnership (10&Towne Expansion + 3/7/8/32 + 4 new wells)	\$1,290	No
NB-4	Non-Blending: Pomona + La Verne Partnership (10 & Towne Expansion + 3/7/8/32 + Old Baldy + 3 new wells)	\$1,280	Yes
NB-5	Non-Blending: La Verne + GSWC (6th &White + Old Baldy + Durward + 6 new wells, including Cartwright)	\$1,370	No
NB-6	Non-Blending: La Verne + GSWC (Fulton + Old Baldy + Durward + 6 new wells, including Cartwright)	\$1,230	Yes
NB-7	Non-Blending: Pomona + GSWC (10&Towne Expansion + 3/7/8/32 + Durward + 3 new wells)	\$1,250	No
NB-8	Non-Blending: Pomona + GSWC + La Verne (10&Towne Expansion + 3/7/8/32 + Durward + Old Baldy + 2 new wells)	\$1,220	Yes
NB-9	NonBlending: Pomona + GSWC + La Verne (10&Towne Expansion + Durward + Old Baldy + 4 new wells)	\$1,170	Yes

The four lowest cost blending alternatives and the four lowest cost non-blending alternatives were carried forward to the alternatives evaluation. These eight remaining alternatives are further characterized using the alternatives evaluation process described in Section 4.

## 4 Alternatives Evaluation

This section describes the evaluation process for the alternatives carried forward for further development from Section 3. Each alternative is characterized in terms of costs, operational reliability, institutional and regulatory complexity, environmental impacts, time to implement, and length of time that the supply source is available. Assumptions and scoring procedures used in the evaluation are also described. The section concludes with a summary of the alternative rankings to arrive at a preferred alternative.

### 4.1 Alternatives Evaluation Criteria

Each criterion used in the alternatives evaluation is scored based on a 1 to 3 system, with 3 being the highest (best) score and 1 being the lowest (worst).

### 4.1.1 Conceptual Costs

The capital and O&M cost assumptions used to develop the building block options in Section 3 are also used to develop costs for the full alternatives. Costs are presented as annual capital, annual O&M, facility unit cost (capital plus O&M), supply unit cost, and total unit cost. The alternatives are ranked in two ways as shown in Table 7: (1) according to total unit cost and (2) according to total initial capital cost. Alternatives that have lower costs score higher in this analysis. Detailed cost calculations are included in Appendix A.

**Table 7: Combined Unit Cost Scores**

Alt. No.	Total Capital Cost (\$M)	Annual Capital (\$/year)	Annual O&M (\$/year)	Facility Unit Cost (\$/AF) <sup>1</sup>	Supply Unit Cost (\$/AF)	Total Unit Cost (\$/AF)	Score
B-4	\$14.4M	\$1,070,000	\$1,210,000	\$460	\$130	\$590	●
B-5	\$13.0M	\$970,000	\$1,270,000	\$450	\$160	\$610	●
B-9	\$11.4M	\$850,000	\$1,230,000	\$420	\$130	\$550	●
B-10	\$10.1M	\$750,000	\$1,370,000	\$420	\$160	\$580	●
NB-4	\$38.2M	\$2,850,000	\$2,730,000	\$1,120	\$160	\$1,280	○
NB-6	\$55.8M	\$4,160,000	\$1,610,000	\$1,150	\$80	\$1,230	○
NB-8	\$33.8M	\$2,520,000	\$2,790,000	\$1,060	\$160	\$1,220	○
NB-9	\$42.3M	\$3,150,000	\$2,300,000	\$1,090	\$80	\$1,170	○

1. Facility Unit Cost includes capital and O&M

Scores: ● = \$500-699\$/AF and \$10-20M; ◐ = \$700-999/AF and \$20-30M; ○ = \$1000-1299/AF and \$30-60M

#### 4.1.1. Reliability

Operational reliability represents the likelihood that the project facilities will provide continuous, uninterrupted service to PBWA. This evaluation assumes that individual facilities will be designed to provide reliable service over the course of the project lifespan and that operational reliability is therefore not a differentiator between the alternatives.

The more significant factor for reliability is the availability of imported water blend flows in the PWR-JWL, which varies throughout the year. Alternatives that rely on having a minimum flow of imported water in the PWR-JWL for blending purposes are considered to be less reliable than alternatives that provide treatment and don't require blending. For the blending-only alternatives, there will be intermittent periods of time during which the flow of imported water in the PWR-JWL is not enough to blend the full 5,000 AFY to drinking water constituent levels for VOCs, nitrate, and perchlorate. During these intermittent periods, the supply of 5,000 AFY will need to be curtailed. These reliability scores are summarized in Table 8.

**Table 8: Reliability Scores**

Alt. No.	Alternative	Blending	No Blending	Score
B-4	Blend- Pomona	X		○
B-5	Blend-Multi 1	X		○
B-9	Blend-Multi 2	X		○
B-10	Blend-Multi 3	X		○
NB-4	Nonblend-Multi 1		X	●
NB-6	Nonblend-Multi 2		X	●
NB-8	Nonblend-Multi 3		X	●
NB-9	Nonblend-Multi 4		X	●

Scores: ● = nonblend; ○ = blend

### 4.1.2 Institutional/Regulatory Complexity

#### Institutional

Institutional complexity is characterized by the number of different partners that would be necessary to implement an alternative. Table 9 is intended to represent many, though not necessarily all, of the required partners for each alternative. Alternatives that would potentially require fewer partners are ranked higher than those requiring more partners.

#### Regulatory

For the purposes of this analysis, regulatory complexity is characterized by the number of permits that are required to implement an alternative. Table 9 represents many, though not necessarily all, of the required permits. Alternatives that involve fewer permits or regulatory actions are ranked higher than those requiring more.

The applicable permits for these alternatives include both treatment and blending permits from the CDPH, industrial waste discharge permits from LACSD for discharge of ion exchange brine wastes to the sewer system, and Air Quality Management District (AQMD) permits for emissions from air stripping facilities.

**Table 9: Institutional and Regulatory Complexity Scores**

Alt. No.	Partners			Permits				Score
	La Verne	Pomona	GSWC	CDPH (treat.)	CDPH (blend.)	Brine Discharge Permit	AQMD	
B-4		X			X			●
B-5	X	X			X			◐
B-9		X	X		X			◑
B-10	X	X	X		X			◐
NB-4	X	X		X		X	X	○
NB-6	X	X	X	X		X	X	○
NB-8	X	X	X	X		X	X	○
NB-9	X	X	X	X		X	X	○

Scores: ● = 2 or less; ◐ = 3 to 4; ○ = 5 to 6

According to the table above, the highest scoring alternative for institutional and regulatory complexity is Blend-Pomona (B-4).

### 4.1.3 Energy and CO<sub>2</sub> Emissions

Energy is expressed as the kWh/AF required to implement an alternative. It is calculated by combining the energy requirements for treatment and accessing supplies. These calculations include the energy needed for these typical operations only and do not include raw material or construction activities. The following assumptions were used to estimate energy requirements:

- Wells<sup>2</sup>: 600 kWh/AF
- Air Stripper<sup>3</sup>: 50 kWh/AF
- Ion Exchange<sup>3</sup>: 100 kWh/AF

Alternatives that rely on blending will require treated imported water supply. It's assumed that a minimum treated imported water supply will be required as described in Table 6, but are not included as part of the energy and CO<sub>2</sub> calculations. The unit of imported supply necessarily for blending of the additional groundwater supply is assumed to already exist in the PWR- JWL as an additional purchased increment of supply to meet additional demands and therefore does not require additional energy for blending purposes. Although not included, the typical energy

<sup>2</sup> RMC, 2011. City of Pomona Integrated Water Supply Plan.

demand for imported water is 2,500 kWh/AF using the average values for the State Water Project and the Colorado River Authority plus additional energy requirements of 500 kWh/AF for treatment.<sup>3</sup>

In addition to energy demands, the carbon dioxide (CO<sub>2</sub>) emissions were also calculated in order to indicate potential contributions with respect to climate change. These values were calculated by applying a factor of 0.724 lbs. of CO<sub>2</sub> per kWh/AF, based on the California Climate Action Registry, General Reporting Protocol, January 2009.

Energy and CO<sub>2</sub> emissions are summarized for each alternative in Table 10. Alternatives with lower energy and CO<sub>2</sub> emissions are scored higher.

**Table 10: Energy and CO<sub>2</sub> Emissions Scores**

Alt. No.	Energy (kWh/AF)	CO2 Emissions (lbs./AF)	Score
B-4	600	430	●
B-5	600	430	●
B-9	600	430	●
B-10	600	430	●
NB-4	740	530	◐
NB-6	740	530	◐
NB-8	740	530	◐
NB-9	740	530	◐

Scores (kWh/AF): ● = 600- 700; ◐ = 700-800; ○ = 800+

The blend alternatives score highest - which is expected as they do not require additional treatment beyond what has already been incurred as part of producing the existing imported supply used for blending.

#### 4.1.4 Removal of Pollutants

This criterion is intended to measure the extent to which regional water quality in the Six Basins region is improved by the removal of pollutants such as nitrate, perchlorate, and volatile organic compounds. Blending does not remove any pollutants from the region, but ion exchange treatment and air stripping treatment do remove pollutants from the region, so alternatives that provide treatment receive higher scores. Water quality scores are summarized in Table 11.

**Table 11: Regional Water Quality Scores**

Alt. No.	Removal of nitrate (AFY)	Removal of perchlorate (AFY)	Removal of VOCs (AFY)	Score
B-4	0	0	0	○
B-5	0	0	0	○
B-9	0	0	0	○
B-10	0	0	0	○
NB-4	4,200	5,000	4,200	●
NB-6	3,600	5,000	0	●
NB-8	3,600	5,000	3,600	●
NB-9	2,400	3,800	2,400	●

Scores: ● = removes contaminants; ○ = does not remove contaminants

<sup>3</sup> Wilkinson et al, 2007. "Analysis of the Energy Intensity of Water Supplies for West Basin Municipal Water District", Prepared for West Basin Municipal Water District.

According to the table, the highest scoring alternative for regional water quality is NB-4.

**Impact from Potential Forthcoming Chromium VI MCL**

Though not included in the evaluation scoring, the potential adoption of a Chromium VI Drinking Water Maximum Contaminant Level (MCL) by CDPH could impact the reliability and cost of any alternative. Some industry estimates indicate that the State could implement an MCL for Chromium VI within 2 to 4 years from the date of this writing. It is uncertain what MCL concentration will be adopted, but current estimates range from 1.0 ug/L to 10 ug/L. For the source wells in most of the PBWA supply alternatives, treatment would be required to achieve an MCL within this range.

For Non-Blending Alternatives, adoption of a Chromium VI MCL would necessitate an additional ion exchange process train, located at the planned treatment sites for removal of nitrate, perchlorate, and VOCs. For Blending Alternatives, MCL adoption would also necessitate an additional ion exchange process train, because blending will not be a sufficient means to lower Chromium VI levels to the predicted MCL concentration range. Nonetheless, the Blending Alternatives would still achieve perchlorate, nitrate, and VOC reduction using blending only.

For both blending and non-blending alternatives, the additional life cycle cost of installing and operating a treatment module dedicated to removal of Chromium VI would be in the approximate range of \$100 to \$200 per AF. For the purpose of comparing alternatives, this additional cost applies to all the alternatives, assuming the MCL is adopted. As such, Chromium VI does not differentiate between alternatives, but it does narrow the list of supply alternatives that will undercut the cost of imported water.

**4.1.5 Timing**

**Start Date**

Start date is the estimated date when the alternative could begin providing a new water supply. This criterion captures the benefits of increased reliability compared to imported water, and other benefits that could be realized sooner rather than later. Alternatives that could be placed in operation sooner receive higher rankings. Scores for start date are summarized in Table 12.

**Table 12: Start Date Scores**

Alt. No.	Years to Start Date	Score
B-4	3	●
B-5	3	●
B-9	3	●
B-10	3	●
NB-4	6	○
NB-6	6	○
NB-8	6	○
NB-9	6	○

Scores: ● = 3 yrs.; ○ = 6 yrs.

According to the table above, the highest scoring alternatives for start date are the blend alternatives.

**Supply Source Duration**

The supply source duration criterion captures the benefits of having a longer time period during which supply sources are contracted. This generally takes the form of a lease term for groundwater pumping rights. Alternatives that could be implemented with longer lease terms are given higher rankings than those with shorter lease terms. Scores for supply duration are summarized in Table 13.

**Table 13: Supply Duration Scores**

Alt. No.	Supply Source Basin	Duration of Lease	Score
B-4	Pomona	10 yrs.	○
B-5	Pomona & Ganesha	10-25 yrs.	●
B-9	Pomona	10 yrs.	○
B-10	Pomona & Ganesha	10-25 yrs.	●
NB-4	Pomona & Ganesha	10-25 yrs.	●
NB-6	Pomona & Ganesha	10-25 yrs.	●
NB-8	Pomona & Ganesha	10-25 yrs.	●
NB-9	Pomona & Ganesha	10-25 yrs.	●

Scores: ● > 10 years ○ = 10 yrs.

## 4.2 Summary Ranking Table of Alternatives Analysis

The rankings from all of the various evaluation criteria are summarized below in Table 14.

**Table 14: Summary of Alternative Rankings**

Alt No.	Cost	Reliability	Institutional/ Regulatory	Energy/ CO <sub>2</sub>	Regional Water Quality	Start Date	Supply Duration
B-4	●	○	●	●	○	●	○
B-5	●	○	◐	●	○	●	●
B-9	●	○	◐	●	○	●	○
B-10	●	○	◐	●	○	●	●
NB-4	○	●	○	◐	●	○	●
NB-6	○	●	○	◐	●	○	●
NB-8	○	●	○	◐	●	○	●
NB-9	○	●	○	◐	●	○	●

**Table 15: Summary of Alternative Rankings**

Alt No.	High	Mid	Low
	●	◐	○
B-4	4	0	3
B-5	4	1	2
B-9	3	1	3
B-10	4	1	2
NB-4	3	1	3
NB-6	3	1	3
NB-8	3	1	3
NB-9	3	1	3

## 5 Preferred Alternative

This section includes a description of the components of the Preferred Alternative, evaluation, facility ownership and operations, implementation schedule, yields and costs, an adaptive management strategy, potential funding and financing, and a near-term action plan. The Preferred Alternative is not any one of the alternatives described in Section 3, but a hybrid alternative developed by PBWA after reviewing the evaluation results.

### 5.1 Preferred Alternative Description

The Preferred Alternative building blocks were selected to allow for a phased implementation strategy. This phasing provided a fast track process to get initial increments of local supply on-line as quickly as possible while also showing how these projects could be build upon to bring additional supplies on-line over time.

Accessing Ganesha Basin supply at the Old Baldy well site and Pomona Basin supply at the Durward well site were deemed to be the most easily implemented and were therefore included in the Preferred Alternative as the initial increment of 1,400 AFY. The remaining leased groundwater rights from the City of La Verne and GSWC will be accessed through the construction of four new wells at the 6<sup>th</sup> and White and Fulton Treatment Plant sites. Blending can be used as the method of treatment for the first 4 wells or 2,100 AFY of production. Once the two final new wells at either the 6th and White site or the Fulton site are brought on-line, blending will no longer sufficiently reduce perchlorate concentrations and well head treatment will need to be introduced at Old Baldy. An analysis of the blending scenario and water quality constituents of concern can be found in Appendix B. These building blocks, when fully implemented, can generate up to 3,500 AFY of local supply for PBWA. This portion of the preferred alternative would be implemented in three phases.

The potential for additional incremental supply beyond the 3,500 AFY would involve a partnership between PBWA and the City of Pomona to lease rights for treatment at a regional treatment plant at Pomona’s current 10 and Towne treatment facility site. The Regional Treatment Plant would be sized at 5 mgd which would be sufficient to at least treat both PBWA (up to 1,500) and Pomona supplies to meet a Chromium VI MCL. This additional incremental supply would not be considered for possible implementation until the first three phases are complete.

#### Phase 1-3 Supplies & Facilities

Phases 1-3 of the Preferred Alternative include those building blocks of groundwater supply from the Six Basins that are considered to be on-line in the near-term. The supplies and facilities associated with those building blocks are shown in Table 16.

A portion of the groundwater rights (1,500 AFY) will be leased from the City of La Verne and GSWC. The remaining 2,000 AFY may come either from a modification to the Six Basins adjudication that would allow PBWA to have access to surplus carryover rights from current Six Basins rights holders; or if that isn’t possible, through recharge of Tier 1 untreated imported water at San Antonio Spreading Grounds. In order to recharge imported water at the San Antonio spreading grounds, it will be necessary to partner with TVMWD as this agency owns and operates the facilities which convey imported water to the spreading grounds.



The initial alternatives described in Table 5 of this TM indicated that 600 AFY of Four Basin groundwater rights could be leased from GSWC; but after further discussions with GSWC, it was clarified that half of the yield would need to go to the GSWC-San Dimas system. This lowers the Four Basins groundwater yield that can be leased from GSWC to 300 AFY.

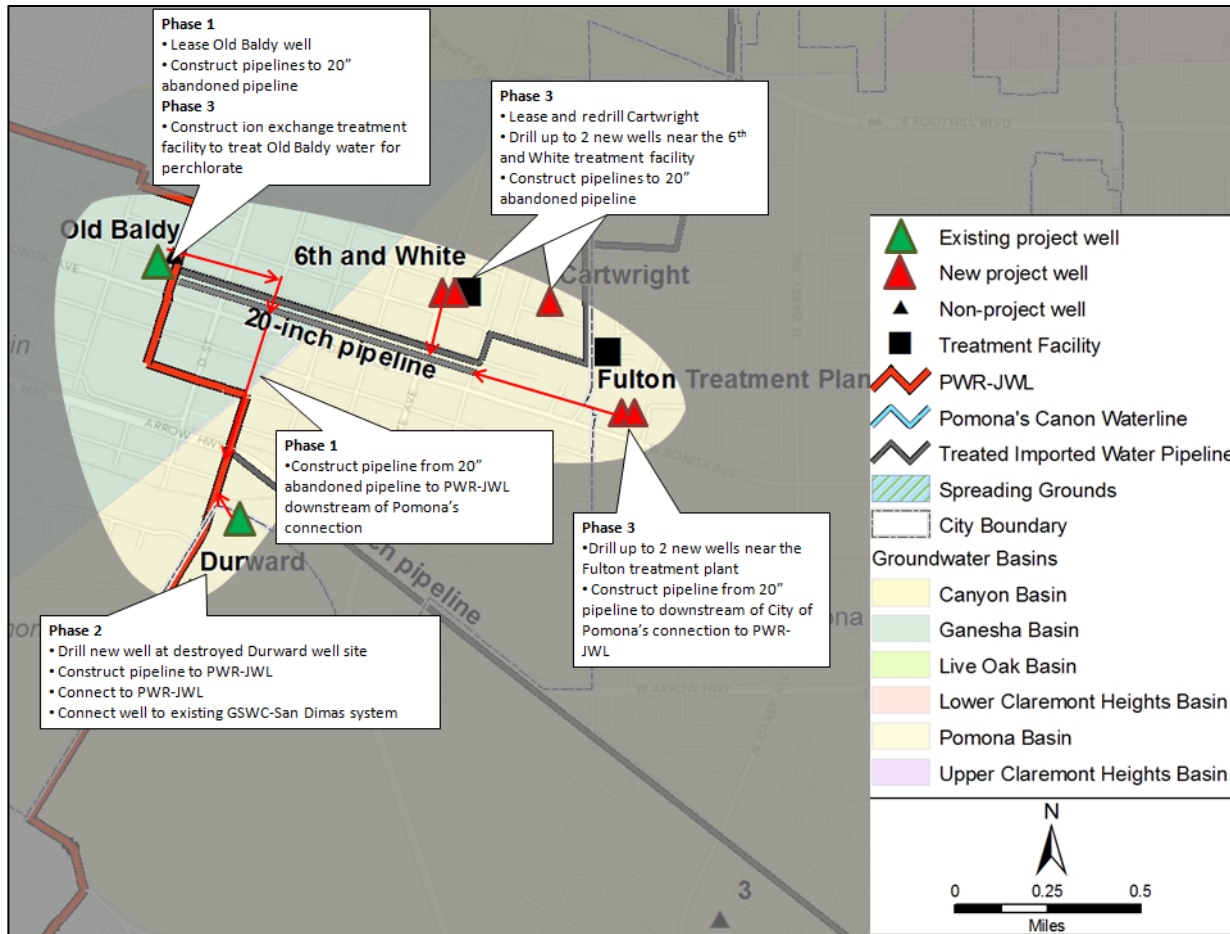
Another modification from the previous alternatives is the removal of booster stations that were considered to be unnecessary after further consideration by PBWA. Previously, it was assumed that one booster pump per well would be required to convey water from the wells to the PWR-JWL, but PBWA has stated that the well pumps are or will be sized such that booster pumps will not be necessary.

**Table 16: Building Blocks used to created the Preferred Alternative**

Building Block	Facilities	Supplies
<b>Old Baldy well</b>	<ul style="list-style-type: none"> <li>• Old Baldy Well</li> <li>• Ion exchange wellhead treatment facility</li> <li>• Abandoned 20-inch pipeline running parallel to the Miramar pipeline along Fifth Street</li> <li>• 1 new pipeline to connect to the abandoned 20-inch pipeline</li> <li>• 1 new pipeline from the abandoned 20-inch pipeline to the PWR-JWL</li> </ul>	<ul style="list-style-type: none"> <li>• Lease City of La Verne Two Basins Rights (800 AFY)</li> </ul>
<b>Durward well</b>	<ul style="list-style-type: none"> <li>• 1 new well (to replace current well)</li> <li>• 1 new pipeline to connect to the PWR-JWL</li> </ul>	<ul style="list-style-type: none"> <li>• Lease GSWC Four Basins Rights (300 AFY)</li> </ul>
<b>6<sup>th</sup> and White Treatment Plant</b>	<ul style="list-style-type: none"> <li>• 2 new wells</li> <li>• Abandoned 20-inch pipeline running parallel to the Miramar pipeline along Fifth Street</li> <li>• 2 new pipelines to connect to the abandoned 20-inch pipeline</li> <li>• 1 new pipeline from the abandoned 20-inch pipeline to the PWR-JWL</li> </ul>	<ul style="list-style-type: none"> <li>• Lease City of La Verne Four Basins Rights (400 AFY)</li> <li>• New surplus carryover pool rights from Six Basins (800 AFY) OR purchase and recharge of Tier 1 untreated imported water</li> </ul>
<b>Fulton Treatment Plant</b>	<ul style="list-style-type: none"> <li>• 2 new wells</li> <li>• Abandoned 20-inch pipeline running parallel to the Miramar pipeline along Fifth Street</li> <li>• 2 new pipelines to connect to the abandoned 20-inch pipeline</li> <li>• 1 new pipeline from the abandoned 20-inch pipeline to the PWR-JWL</li> </ul>	<ul style="list-style-type: none"> <li>• New surplus carryover pool rights from Six Basins (1,200 AFY) OR purchase and recharge of Tier 1 untreated imported water</li> </ul>



Figure 5-1: Preferred Alternative Facilities



**Phase 4 Supplies & Facilities**

An optional longer-term Phase 4 of the Preferred Alternative would involve construction of a Regional Treatment Plant at the City of Pomona’s 10 and Towne site, including facilities to treat for Chromium VI. In addition to the treatment facilities, this component would require a booster pump and a new pipeline to convey the treated water to the PWR-JWL. This optional component is not considered further in this analysis and therefore, only Phase 1-3 preferred alternative facilities are presented in Figure 5-1.

**5.2 Preferred Alternative Evaluation**

The Preferred Alternative differs enough from any of the alternatives previously evaluated, so a separate evaluation is presented in order to ensure that it would be in fact comparable against the previously evaluated alternatives. This evaluation was conducted for only Phases 1-3.

**Cost**

Costs are presented as annual capital, annual O&M, facility unit cost (capital plus O&M), supply unit cost, and total unit cost. The supply costs were adjusted to \$200 per acre-foot (based on groundwater rights lease cost) from \$18 per acre-foot (based on surplus carryover charge) to provide a more conservative estimate. It was determined that it would be more feasible to lease rights from Six Basins rights holders, rather than make a change to the Six Basins Adjudication. As shown in Table 17, the Preferred Alternative ranks highly according to both total unit cost and total initial capital cost. Detailed cost calculations are included in Appendix C.

**Table 17: Preferred Alternative Cost Score**

Total Capital Cost (\$M)	Annual Capital (\$/year)	Annual O&M (\$/year)	Facility Unit Cost (\$/AF) <sup>1</sup>	Supply Unit Cost (\$/AF)	Total Unit Cost (\$/AF)	Score
\$18.5M	\$1,275,000	\$786,000	\$340	\$200-\$330	\$540-\$670	●

1. Facility Unit Cost includes capital and O&M
2. Supply Unit Cost low estimate is based on the use of surplus carry-over supply, and the high estimate is based on the use of recharged, untreated Tier 1 imported water.

Scores: ● = \$500-699\$/AF and \$10-20M; ◐ = \$700-999/AF and \$20-30M; ○ = \$1000-1299/AF and \$30-60M

**Reliability**

As previously discussed in Section 4, operational reliability represents the likelihood that the project facilities will provide continuous, uninterrupted service to PBWA. This evaluation assumes that individual facilities will be designed to provide reliable service over the course of the project lifespan.

The Preferred Alternative relies primarily on the availability of imported water blend flows in the PWR-JWL, but will also include treatment at Old Baldy. Since alternatives that rely on having a minimum flow of imported water in the PWR-JWL for blending purposes are considered to be less reliable than alternatives that do not rely on minimum blend flows, the Preferred Alternative is determined to be moderately reliable compared to the previously-discussed alternatives, as shown in Table 18.

**Table 18: Preferred Alternative Reliability Score**

Blending	No Blending	Score
X	X	◐

Scores: ● = nonblend; ◐ = blend and nonblend; ○ = blend

**Institutional/Regulatory**

Implementation of the Preferred Alternative will require a relative high level of institutional and regulatory complexity. It will require coordination with both the City of La Verne and GSWC to develop the facilities and water supplies that will be needed. In addition, since the Preferred Alternative will utilize both in-line blending and wellhead treatment, the number of permits that are expected are higher than some of the previously-discussed alternatives. Table 19 shows the partners that will be required; and it represents many, though not necessarily all, of the required permits.

**Table 19: Preferred Alternative Institutional and Regulatory Complexity Score**

Partners			Permits				Score
La Verne	Pomona	GSWC	CDPH (treat.)	CDPH (blend.)	Brine Discharge Permit	AQMD	
X		X	X	X	X	X	○

Scores: ● = 2 or less; ◐ = 3 to 4; ○ = 5 to 6

**Energy/CO<sub>2</sub>**

Because the Preferred Alternative relies on both blending and ion exchange for treatment and because booster pumps were determined not to be necessary, the energy usage and CO<sub>2</sub> emissions are between the blending and non-blending alternatives as some imported water will be required to blend. Table 20 shows that the Preferred Alternative scores highly in terms of energy and CO<sub>2</sub> emissions.

**Table 20: Preferred Alternative Energy and CO<sub>2</sub> Emissions Scores**

Energy (kWh/AF)	CO <sub>2</sub> Emissions (lbs./AF)	Score
620	450	●

Scores (kWh/AF): ● = 600- 700; ◐ = 700-800; ○ = 800+

**Regional Water Quality**

As previously discussed, the Preferred Alternative relies on both in-pipe blending and treatment to meet water quality requirements. Due to the partial use of blending, regional water quality in the Six Basins area is not improved as much as alternatives that utilize full treatment. The Preferred Alternative mid-range score shown in Table 21 reflects the limited removal of contaminants from the region through treatment.

**Table 21: Regional Water Quality Scores**

Removal of nitrate (AFY)	Removal of perchlorate (AFY)	Removal of VOCs (AFY)	Score
0	800	0	●

Scores: ● = removes contaminants; ○ = does not remove contaminants

**Start Date**

The Preferred Alternative could commence operation very quickly as the project component involving the Old Baldy well will require minimal construction. In addition, the City of La Verne has expressed willingness to enter into a lease agreement with PBWA. Table 22 shows how the Preferred Alternative scores in terms of start date.

**Table 22: Start Date Scores**

Years to Startup	Score
3	●

Scores: ● = 3 yrs.; ○ = 6 yrs.

**Supply Source Duration**

The Preferred Alternative relies on the lease of groundwater from both the City of La Verne and GSWC, which are assumed to range in lease term between 10-25 years. This is a mid-range score compared to other alternatives as shown in Table 23.

**Table 23: Supply Duration Scores**

Supply Source Basin	Duration of Lease	Score
Pomona/Ganeshha	10-25 yrs.	●

Scores: ● > 10 years ○ = 10 yrs.

**Summary**

Overall, the Preferred Alternative scores in the high range of scores in nearly all of the evaluation criteria, which is shown in Table 24 and Table 25. This scoring is primarily due to reliance on both blending and treatment of groundwater supplies to meet drinking water quality requirements, which allows for lower cost, moderate energy usage and associated CO<sub>2</sub> emissions, and an earlier start date. At the same time, to achieve this level of diversification and overall benefits, the collection of project will be more complex – requiring additional permitting and increased regulatory coordination.

**Table 24: Preferred Alternative Evaluation Summary**

Cost	Reliability	Institutional/ Regulatory	Energy/ CO <sub>2</sub>	Regional Water Quality	Start Date	Supply Duration
●	◐	○	●	●	●	●

**Table 25: Summary of Alternative Rankings**

High	Mid	Low
●	◐	○
5	1	1

### 5.3 Implementation Schedule

The Preferred Alternative is defined by its facilities, supplies and costs once it is fully implemented. However, the actual implementation of the full alternative will need to be conducted in phases beginning in 2012 to allow for new supply projects to be designed and funded prior to coming on-line. The phases are as follows:

- Phase 1 (2012-2013): Lease the Old Baldy well, construct pipeline to the 20-inch line, then to the PWR-JWL.
- Phase 2 (2013-2014): Construct new well at the abandoned Durward well site, and construct pipeline to the PWR-JWL.
- Phase 3 (2014-2020): Construct up to four new wells, pipelines to convey water to the abandoned 20-inch pipeline, and an ion exchange facility for treatment of water from the Old Baldy well.

**Table 26: Preferred Alternative Potable Average Year Supplies (AFY)**

Water Supply Sources	Baseline <sup>1</sup> (2010)	Phase 1 (2012-2013)	Phase 2 (2013-2014)	Phase 3 (2014+)
Imported Water (Treated) <sup>2</sup>	35,600	33,800	33,100	28,400
Six Basins	0	800	1,500	3,500
<b>Total Supply</b>	<b>35,600</b>	<b>34,600</b>	<b>34,600</b>	<b>31,900</b>

1. Baseline total supply is from the 2010 UWMPs for WVWD and RWD.
2. Imported water is the difference between total supply and non-potable supply in the baseline year, and is decreased in each phase by the additional Six Basins supply.
3. Non-potable 2010 water supply or projected use is not included.

### 5.4 Yield and Costs

As described above, the Preferred Alternative will be implemented in three phases starting in 2012. To incorporate the phasing of the Preferred Alternative, separate planning costs were calculated for each phase, as shown in Table 27 and Appendix C.

**Table 27: Preferred Alternative Costs by Phase**

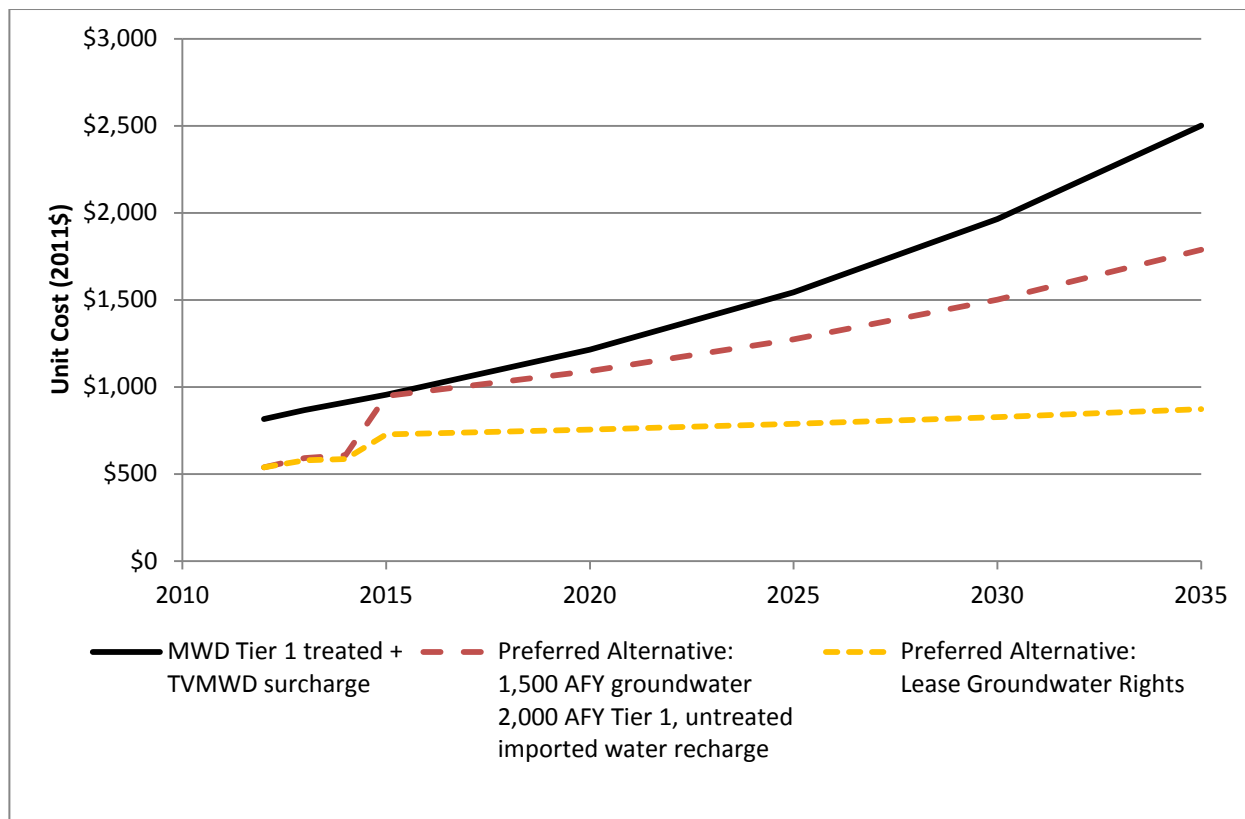
Phase	Capital Costs	Annual O&M Costs	Supply Costs	Cumulative Yield
Phase 1	\$1.1M	\$190,000	\$200/AF	800 AFY
Phase 2	\$2.6M	\$140,000	\$200/AF	1,500 AFY
Phase 3	\$13.9M	\$340,000	\$200-\$330/AF <sup>1</sup>	3,500 AFY

1. Supply costs for Phase 3 vary depending on whether the Six Basins surplus carryover supply is assumed, or whether untreated, Tier 1 imported water is assumed.

In order to determine the cost-effectiveness of the Preferred Alternative, a comparison against PBWA’s projected costs of continuing to purchase treated imported supply is presented in Figure 5-2. The black line indicates the projected costs of supply if PBWA continued to purchase imported supplies through TVMWD without developing the local offset supplies. The red line reflects the highest range of the Preferred Alternative indicated by the need to use raw imported supply for groundwater recharge in order to meet pumping targets. The yellow line reflects a Preferred Alternative that was able to meet pumping targets through local groundwater lease arrangements.

The comparison assumes that imported water rates increase at 5% per year, and assumes no rate of increase for leased groundwater rights. It is also assumed that capital costs have a lifecycle finance rate of 5.5%, over 25 years, and operations and maintenance costs increase at an inflation rate of 3% per year. The cost of the Preferred Alternative is estimated to be lower than the cost of Tier 1 treated imported water.

**Figure 5-2: Preferred Alternative Cost Comparison to Treated Imported Water**



### 5.5 Adaptive Management Strategy

It is recommended that PBWA incorporate an adaptive management strategy throughout implementation of the program. Adaptive management is defined as follows:

*Adaptive management is a structured, iterative process of optimal decision-making in the face of uncertainty, with an aim to reducing uncertainty over time via system monitoring. In this way, decision-making simultaneously maximizes one or more resource objectives and accrues information needed to improve future management.*

The Preferred Alternative was selected based on the evaluation of criteria relative to current conditions and projections. However, given that the alternative has a multiple-year implementation schedule, it is understood that these conditions and projections may change. Changes in public or political sentiment, funding opportunities, climate, resource productivity, and regulations could greatly impact the efficacy of the supplies. Over the same

time, however, the amount of data and information available to make decisions regarding PBWA’s water resources will also increase and provide an opportunity to refine the program.

Incorporating an adaptive management strategy to implementation will allow PBWA the flexibility to be responsive to changes and new information. There are several key decision points that have been identified where it is recommended that PBWA re-examine the current and relevant information available. Key decision points and actions may include:

- Lease agreements with LA Verne and GSWC
- Further negotiations with CDPH and City of Pomona regarding the PWR-JWL
- The implementation of the first incremental supply that would trigger the need for treatment beyond blending
- The scheduling and capital cost outlay of supply projects being planned by PBWA to access other supplies outside of Six Basins.
- The availability/award of funding for implementation
- Changes in water quality regulations, such as a Chromium VI MCL, could necessitate either increases in other supplies to offset unusable groundwater or construction of a Regional Treatment Facility
- Coordination with the City of Pomona and their interest in further leasing of Six Basin rights and/or pursuing Chromium VI treatment

## 5.6 Potential Funding and Financing

Successful implementation of the Preferred Alternative will require adequate financing and funding from a variety of potential sources. Table 28 provides an overview of the potential grant and loan programs available from federal, state and local sources. For example, if PBWA were to participate in MWD’s Local Resource Program, then there could be a rebate of up to \$250/af for the use of newly treated local groundwater supply instead of imported supply.

**Table 28: Potential Grant and Loan Funding Sources**

Funding Program	Program Objective	Amount Available	Comments
<b>Grant Sources</b>			
<b>Title XVI WaterSmart Program, USBR</b>	Provides funding for projects that reclaim and reuse municipal, industrial, domestic or agricultural wastewater and naturally-impaired ground or surface waters.	In 2011, USBR funded 12 projects for \$20.1 million (average \$1.7M per project).	Next application deadline expected early 2013.
<b>Integrated Regional Water Management, Prop 84 (DWR)</b>	Provides funding for projects to protect communities from drought, protect and improve water quality, and reduce dependence on imported water.	Variable by region. Prop 84, Round 1 allocated \$215M to the Los Angeles-Ventura funding area.  The Greater Los Angeles County Region was previously awarded \$25.6M.  Distributions to individual projects ranged from \$0.5M to \$3M.	Next funding cycle (Round 2) projects will be selected October 2012. Can include design, construction activities.  Round 3 expected in 2014.



Funding Program	Program Objective	Amount Available	Comments
<p><b>Local Resources Program (LRP), (MWD)</b></p>	<p>The LRP provides funding for the development of water recycling and groundwater recovery supplies that replace an existing demand or prevent a new demand on MWD's imported water supplies either through:</p> <ul style="list-style-type: none"> <li>• Direct replacement of potable water, or</li> <li>• Increased regional groundwater production.</li> </ul>	<p>Financial incentives between \$1 and \$250 per acre-foot produced over 25 year terms are recalculated annually based on eligible project costs incurred each year and MWD's applicable water rates.</p> <p>MWD currently has funding in place to continue the program.</p> <p>This is an ongoing program that does not have discrete deadlines.</p>	<p><i>Advantage goes to projects well positioned for construction and timely production of stated project capacities in near future. Must be a MWD Member Agency, so connection to TVMWD is important.</i></p>
<b>Loan Sources</b>			
<p><b>New Local Water Supply Feasibility Study Loans, Prop. 82 (DWR)</b></p>	<p>Provides construction loans for projects such as canals, dams, reservoirs, groundwater extraction facilities or other improvements.</p>	<p>Total program funds available are \$8.7 million; up to \$5 million per eligible project for construction</p>	<p>Groundwater extraction facilities are eligible.</p>
<p><b>Clean Water State Revolving Fund - Planning Projects (CWSRF), (SWRCB)</b></p>	<p>Loans for high-priority water quality activities. Eligible projects include, but are not limited to: Construction of publicly-owned facilities: Wastewater treatment; Local sewers; Sewer interceptors; Water reclamation facilities (including groundwater remediation); and Stormwater treatment.</p>	<p>Annually, the program disburses between \$200 and \$300 million to eligible projects. Interest Rate - ½ most recent General Obligation (GO) Bond Rate for up to 20 yrs or 30 for DACs. Max \$50 M per agency.</p>	<p>Precedent set for using funding for projects that involve pumping and treating contaminated groundwater and then using as in-lieu supply.</p>
<p><b>Safe Drinking Water State Revolving Fund</b></p>	<p>Provides funding to correct public water system deficiencies based upon a prioritized funding approach that addresses the systems' problems that pose public health risks, systems with needs for funding to comply with requirements of the Safe Drinking Water Act, and systems most in need on a per household affordability basis</p>	<p>20 year payback</p> <p>Subsidized interest rate (1/2 the General Obligation bond rate)</p> <p>\$20M max/yr/project</p> <p>\$30M max/yr/entity</p> <p>\$500,000 max/project</p> <p>Upon completion of planning study – submit construction application</p>	<p>Hard to get high on priority list if not posing a current health risk (disadvantaged community status a plus).</p>
<p><b>Prevention and Reduction of Groundwater Contamination Program, Section 75025, Prop. 84, (DPH)</b></p>	<p>Loans and grants for projects to prevent or reduce contamination of groundwater that serves as a source of drinking water.</p>	<p>Total of aprox. \$15 million for Round 2.</p> <p>Maximum grant award is \$10M per applicant.</p> <p>Unclear if there will be future funding rounds.</p> <p>No local match required.</p>	<p>Must submit Project Technical Report (can be based on engineering report or feasibility study or similar document). CEQA has to be completed prior to issuance of funding agreement. Should have started CEQA by time applying.</p> <p>Position for Round 3 (no schedule released yet).</p>

## 5.7 Next Steps

With the completion of this TM, PBWA has selected a phased approach to implement Phase 1 -3 of the Preferred Alternative comprised of several individual projects that together could provide up to 3,500 AFY of Six Basins supply for PBWA use. The phasing of these individual projects (as well as the Phase 4 regional treatment component) has been integrated into PBWA's overall Regional Water Supply Reliability Program (RWSRP) Framework. The RWSRP Framework provides phased implementation goals for all local supply partnership projects pursued by PBWA through 2020. It is dynamic planning process that is serving as the umbrella program to address PBWA's water supply goals.

This TM serves as a preliminary planning document. It is recommended that more detailed facilities plans be completed for each individual phase of the Preferred Alternative. The facilities plans could be detailed enough to equate to a 10 percent design. Subsequent full designs and environmental documentation and permitting required for the Preferred Alternative project implementation should be conducted as part of or in conjunction with the RWSRP Framework as appropriate.

Negotiations between PBWA or (WVWD and RWD) and Six Basins agency partners on the leasing of supplies and facilities will also need to be pursued prior to supplies coming online. These arrangements will be instrumental in also being able to apply for and obtain funding from the programs shown in Table 28.



# Puente Basin Water Agency (PBWA)



## Pomona Basin Regional Groundwater Project Final Engineering Report

Prepared by:



October 14, 2013

The pipeline runs westward along 5<sup>th</sup> Street past C Street, but this portion has been blocked off and is still in use by the City of La Verne. The portion of the pipeline east of C Street is currently unused (abandoned in place), and according to the City of La Verne, would require lining to be placed back into pressurized service for use by the Project. At one time this pipeline continued to the Fulton Treatment Plant east of I Street, but this portion was replaced by a 30" line in use today. This pipeline may be used for subsequent phases of the Six Basins Groundwater Project, but is not part of this Phase 1 and 2 Project.

### **3.1.6 Old Baldy Well**

Owned by the City of La Verne, the Old Baldy well (see **Figure 3-1**) is located at 5th and C streets and has a pumping capacity of 650 gpm but has been offline since 2002 due to nitrate and perchlorate contamination in the Ganesha Basin. The well site includes a forebay and pump back pumping station facilities to be used for blending the water prior to distribution. The full capacity of this well would be available to the PBWA under a leasing agreement for the Project. The well is fully operable, and the well pump is periodically exercised by City of La Verne. PBWA pulled the well pump for inspection and cleaning in 2012.

**Figure 3-2: Old Baldy Well**



The Old Baldy Forebay has a 13,000 gallon capacity and when in operation, was used to blend water from the Old Baldy well with treated imported water from the TVMWD No. 3 connection. The forebay will not be needed for the Project.

## 5.2 New Durward Well

Given that the current well at the Durward site has been demolished, construction of a new well rated at 500 gpm will be required for the Project. The new well will be equipped with a well casing with screen, flow meter, check valve and analytical devices to monitor flow and pressure with safety interlocks to protect the equipment. Design of the well will be investigated in the next phase to determine specifics like type and depth of casing as well as location of the well screen and size of openings, filter pack, electrical supply and type of housing structure for the well. Provisions will be made for access to equipment and above ground and underground utilities, discharge options, and noise suppression/control. The next phase will identify well construction details, permits to be acquired compliance with NPDES requirements (if required).

### 5.2.1 Site Plan

The proposed Durward well location is shown on **Figure 5-4**.

### 5.2.2 Pipeline

A new pipeline from the new well to the PWR-JWL is necessary for the Project. As shown on **Figure 5-4**, the new pipeline would involve a relatively short segment. Between the Durward Well and PWR-JWL, the pipeline from the Old Baldy well would connect to the Durward Well discharge line and the flow would be mixed with significantly more imported water in the PWR-JWL pipeline as it is conveyed to PBWA.

There is not a bypass line at this location so a provision may need to be added to the site to allow diversion of start-up water to be conveyed into the storm water system. This may be needed to allow for the diversion of the start-up water for stabilizing the groundwater supply prior to delivery into the system as previously described. In the event that a discharge to the storm water system will not be permitted, temporary storage facilities may be required or the water could be disposed to a sanitary sewer system. The design phase will consider whether a permanent tank is preferred with the ability to bleed the water slowly back into the system or haul it offsite for disposal.

### 5.2.3 Point of Connection

The point of connection for the Durward well to the PWR-JWL is shown on **Figure 5-4**. Connecting the Durward and Old Baldy supply sources at this location results in blended water quality in the JWL that meets all regulatory requirements as demonstrated in Table 4-10. An online nitrate analyzer will be installed at the Durward well site location to measure the amount of nitrate in the well supplies. During the design phase, the configuration will be developed with CDPH to determine the best location to install the analyzer. One option is to install one for the combined flows from the wells. Another option is to install one per well. And a third option is to install a single unit and provide a sample line from each source and configure it so that a single analyzer can cycle ever few minutes to each source.

The design phase will also install a hypochlorite and ammonia feed system to provide a residual disinfectant to match the imported water supply. The chemical feed system would be flow paced based on the Old Baldy and Durward flows and would be added downstream of the Old Baldy and Durward flow connection and prior to entry into the PWR-JWL.

## Matt Mullarkey

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**From:** Erik Hitchman <ehitchman@wvwd.com>  
**Sent:** Wednesday, June 18, 2014 9:42 AM  
**To:** Matt Mullarkey  
**Cc:** Mike Holmes; Ken Deck  
**Subject:** Re: Imported Water Blend for GLAC Prop 84 Round 3 Grant Application

Hi Matt,

I got all my information and looked at data over the last three years for flows on the Joint Water Line. Based on the data, the breakdown is:

April-Sept: 46.5% SPW  
Oct-March: 52.25% SPW

It would appear that we are approximately 50% SPW on the line all year. The average blend from the Weymouth Treatment Plant was 34.5% During the same period. Let me know if you have any questions or need additional information.

Erik

Sent from Windows Mail

From: [MMullarkey@rmcwater.com](mailto:MMullarkey@rmcwater.com)<<mailto:MMullarkey@rmcwater.com>>  
Sent: Tuesday, June 17, 2014 5:38 PM  
To: Erik Hitchman<<mailto:ehitchman@wvwd.com>>

Perfect! Thanks Erik.

-----Original Message-----

From: Erik Hitchman [<mailto:ehitchman@wvwd.com>]  
Sent: Tuesday, June 17, 2014 5:20 PM  
To: Matt Mullarkey  
Subject: RE: Imported Water Blend for GLAC Prop 84 Round 3 Grant Application

Hi Matt,

I am working on the data. I need to get some additional info from our production group. I should have it to you tomorrow morning.

Erik

Sent from my Windows Phone

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From: Matt Mullarkey<<mailto:MMullarkey@rmcwater.com>>  
Sent: 6/17/2014 11:29 AM  
To: Erik Hitchman<<mailto:ehitchman@wvwd.com>>  
Cc: Persephene St. Charles<<mailto:pstcharles@rmcwater.com>>  
Subject: Imported Water Blend for GLAC Prop 84 Round 3 Grant Application

# Groundwater Assessment Study



A Status Report on the Use of Groundwater in the  
Service Area of the Metropolitan Water District of  
Southern California

Report Number 1308

*September 2007*

water quality issues in these two basins, production is limited but still significant. Most of the groundwater production in the Six Basins area is from the Upper Claremont Heights Basin and the Pomona Basin. Between 1985 and 2004, pumping in the Upper Claremont Heights Basin ranged from 7,857 AFY to 14,732 AFY with an average of 9,890 AFY. Production in this basin generally correlates with precipitation. There has been limited pumping in the Lower Claremont Heights Basin after 1998, and extractions from the Canyon Basin are a result of precipitation because it responds quickly to runoff from San Antonio Canyon. Production from the Pomona Basin ranged from 5,028 AFY to 9,195 AFY between 1985 and 2004. Production from the Pomona Basin has been less than the adjudicated allowance because of water quality issues in this basin. However, in recent years, production from the Pomona Basin has increased as facilities to remove contaminants from the groundwater are constructed.

**Table 9-3  
Summary of Production Wells in the Six Basins**

Basin	Number of Wells	Estimated Production Capacity (AFY)	Average Production 1985-2004 (AFY)	Well Operation Cost (\$/AF)
Canyon	54 Active 14 Inactive	At least 35,000	595	\$60-175 (average of \$125) Power only
Upper Claremont Heights			10,199	
Lower Claremont Heights			723	
Pomona			6,649	
Ganesha			Data not available	
Live Oak			Data not available	
<b>Total</b>			<b>68</b>	

Source: Three Valleys, 2006

**Other Production**

Other non-municipal production has not been reported for the Six Basins. Non-municipal production is included in production data discussed above.

# Analysis of the Energy Intensity of Water Supplies for West Basin Municipal Water District

March, 2007

Robert C. Wilkinson, Ph.D.



### Energy Intensity of Water Supplies for West Basin Municipal Water District

	af/yr	Percentage of Total Source Type	kWh/af Conveyance Pumping	kWh/af MWD Treatment	kWh/af Recycled Treatment	kWh/af Groundwater Pumping	kWh/af Groundwater Treatment	kWh/af Desalination	kWh/af WBMWD Distribution	Total kWh/af	Total kWh/year
<b>Imported Deliveries</b>											
State Water Project (SWP) <sup>1</sup>	57,559	43%	3,000	44	NA	NA	NA	NA	0	3,044	175,209,596
Colorado River Aqueduct (CRA) <sup>1</sup> (other than replenishment water)	76,300	57%	2,000	44	NA	NA	NA	NA	0	2,044	155,957,200
<b>Groundwater<sup>2</sup></b>											
natural recharge	19,720	40%	NA	NA	NA	350	0	NA	0	350	6,902,030
replenished with (injected) SWP water <sup>1</sup>	9,367	19%	3,000	44	NA	350	0	NA	0	3,394	31,791,598
replenished with (injected) CRA water <sup>1</sup>	11,831	24%	2,000	44	NA	350	0	NA	0	2,394	28,323,432
replenished with (injected) recycled water	8,381	17%	205	0	790	350	0	NA	220	1,565	13,116,278
<b>Recycled Water</b>											
West Basin Treatment, Title 22	21,506	60%	205	NA	0	NA	NA	NA	285	490	10,537,940
West Basin Treatment, RO	14,337	40%	205	NA	790	NA	NA	NA	285	1,280	18,351,360
<b>Ocean Desalination</b>	20,000	100%	200	NA	NA	NA	NA	3,027	460	3,687	82,588,800

Notes:

NA Not applicable

<sup>1</sup> Imported water based on percentage of CRA and SWP water MWD received, averaged over an 11-year period. Note that the figures for imports do not include an accounting for system losses due to evaporation and other factors. These losses clearly exist, and an estimate of 5% or more may be reasonable. The figures for imports above should therefore be understood to be conservative (that is, the actual energy intensity is in fact higher for imported supplies than indicated by the figures).

<sup>2</sup> Groundwater values include entire basin, West Basin service area covers approximately 86% of the basin. Groundwater values are specific to aquifer characteristics, including depth, within the basin.





# California Climate Action Registry General Reporting Protocol

Reporting Entity-Wide Greenhouse Gas Emissions

Version 3.1 | January 2009



Thus, regional/power pool emission factors for electricity consumption can be used to determine emissions based on electricity consumed. If you can obtain verified emission factors specific to the supplier of your electricity, you are encouraged to use those factors in calculating your indirect emissions from electricity generation. If your electricity provider reports an electricity delivery metric under the California Registry's Power/Utility Protocol, you may use this factor to determine your emissions, as it is more accurate than the default regional factor. Utility-specific emission factors are available in the Members-Only section of the California Registry website and through your utility's Power/Utility Protocol report in CARROT.

This Protocol provides power pool-based carbon dioxide, methane, and nitrous oxide emission factors from the U.S. EPA's eGRID database (see Figure III.6.1), which are provided in Appendix C, Table C.2. These are updated in the Protocol and the California Registry's reporting tool, CARROT, as often as they are updated by eGRID.

To look up your eGRID subregion using your zip code, please visit U.S. EPA's "Power Profiler" tool at [www.epa.gov/cleanenergy/energy-and-you/how-clean.html](http://www.epa.gov/cleanenergy/energy-and-you/how-clean.html).

Fuel used to generate electricity varies from year to year, so emission factors also fluctuate. When possible, you should use emission factors that correspond to the calendar year of data you are reporting. CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O emission factors for historical years are available in Appendix E. If emission factors are not available for the year you are reporting, use the most recently published figures.

### U.S. EPA Emissions and Generation Resource Integrated Database (eGRID)

The Emissions & Generation Resource Integrated Database (eGRID) provides information on the air quality attributes of almost all the electric power generated in the United States. eGRID provides search options, including information for individual power plants, generating companies, states, and regions of the power grid. eGRID integrates 24 different federal data sources on power plants and power companies, from three different federal agencies: EPA, the Energy Information Administration (EIA), and the Federal Energy Regulatory Commission (FERC). Emissions data from EPA are combined with generation data from EIA to produce values like pounds per megawatt-hour (lbs/MWh) of emissions, which allows direct comparison of the environmental attributes of electricity generation. eGRID also provides aggregated data to facilitate comparison by company, state or power grid region. eGRID's data encompasses more than 4,700 power plants and nearly 2,000 generating companies. eGRID also documents power flows and industry structural changes. [www.epa.gov/cleanenergy/egrid/index.htm](http://www.epa.gov/cleanenergy/egrid/index.htm).

Figure III.6.1 eGRID Subregions



Source: eGRID2007 Version 1.1, December 2008 (Year 2005 data).