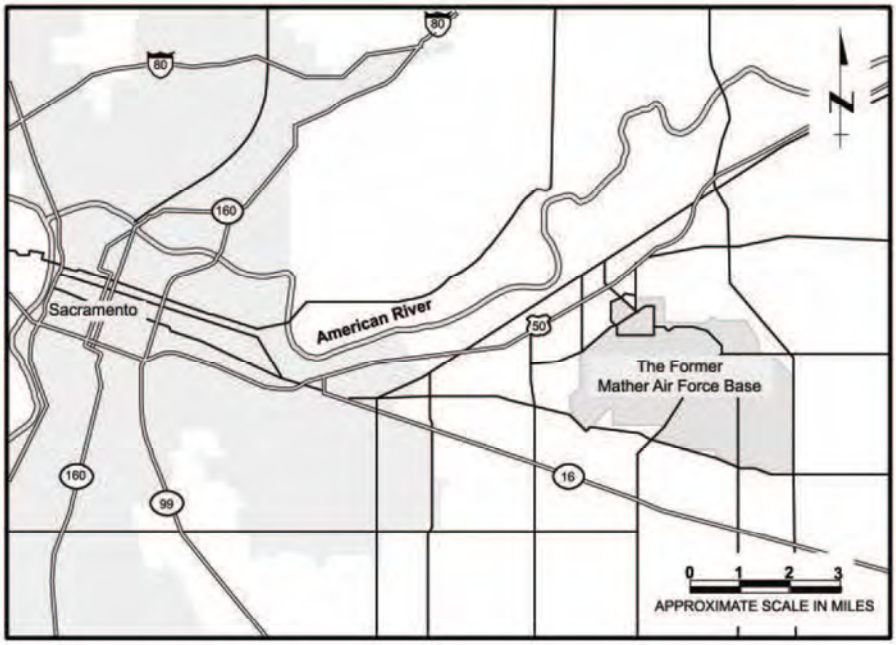
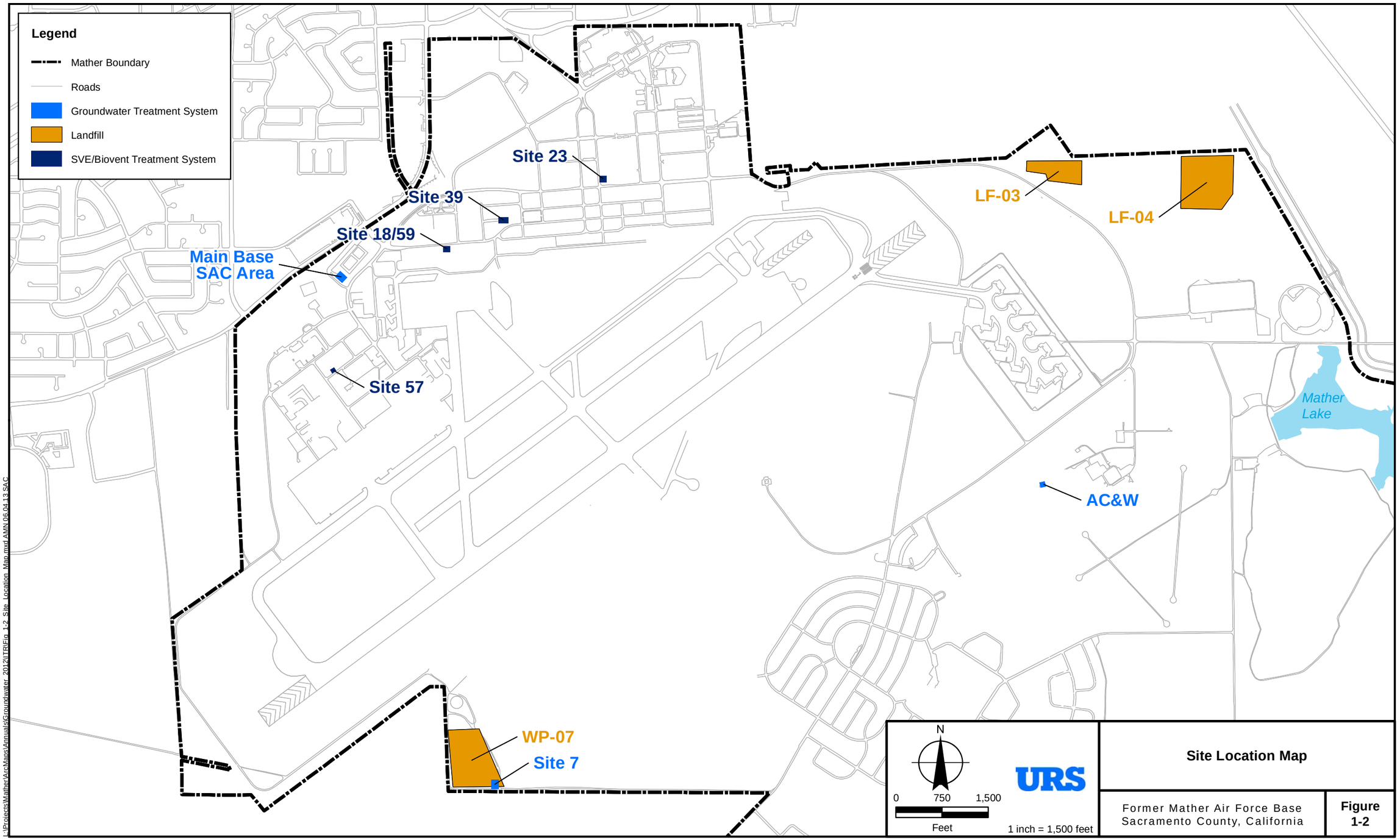
FIGURES

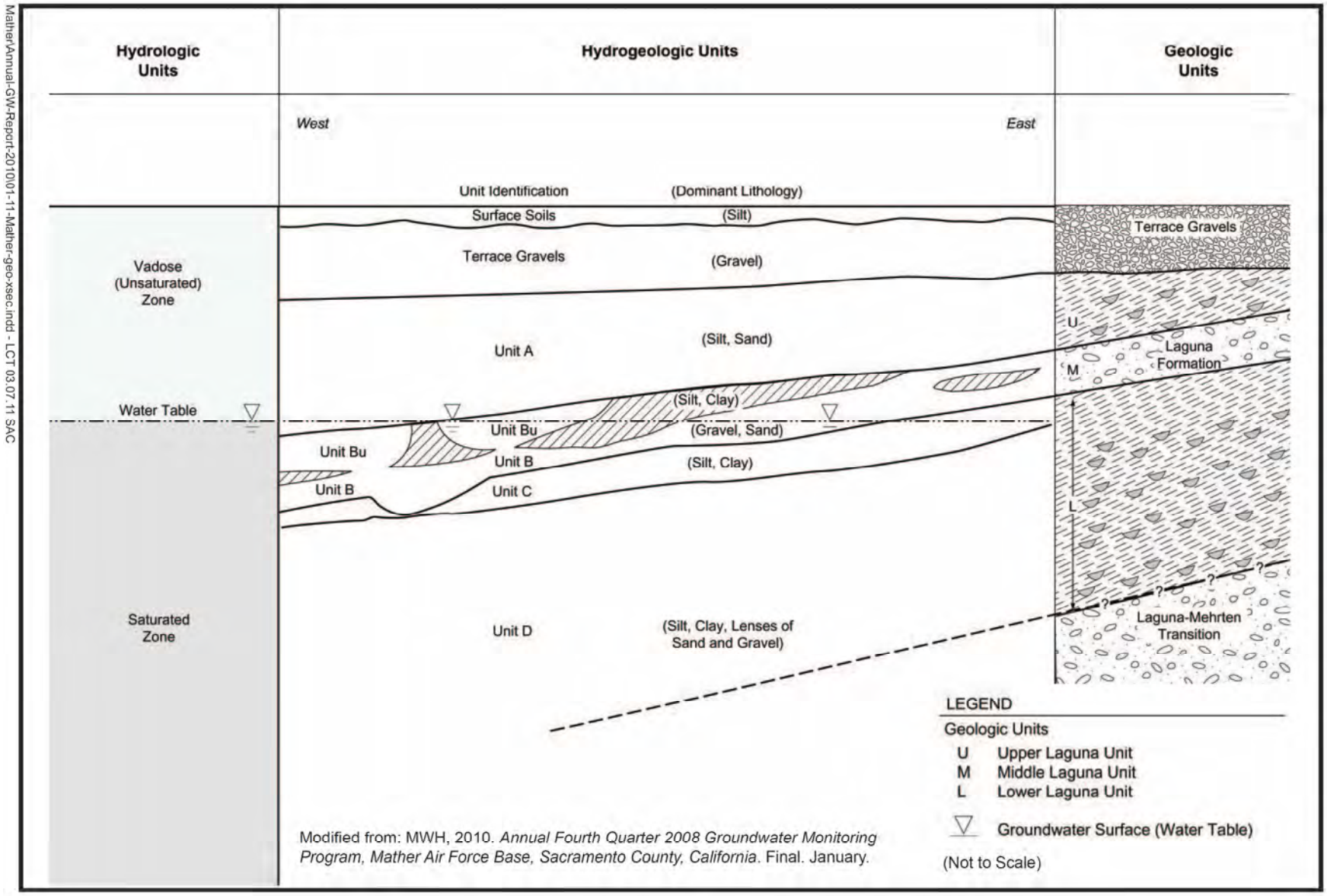


Modified from: MWH, 2010. *Annual Fourth Quarter 2009 Groundwater Monitoring Program, Mather Air Force Base, Sacramento County, California*. Final. January.

Mather\Annual-GW-Report-2010\01-11-Mather-loc-map.indd - LCT 03.07.11 SAC

Figure 1-1. Regional Location Map, Former Mather Air Force Base, Sacramento County, California

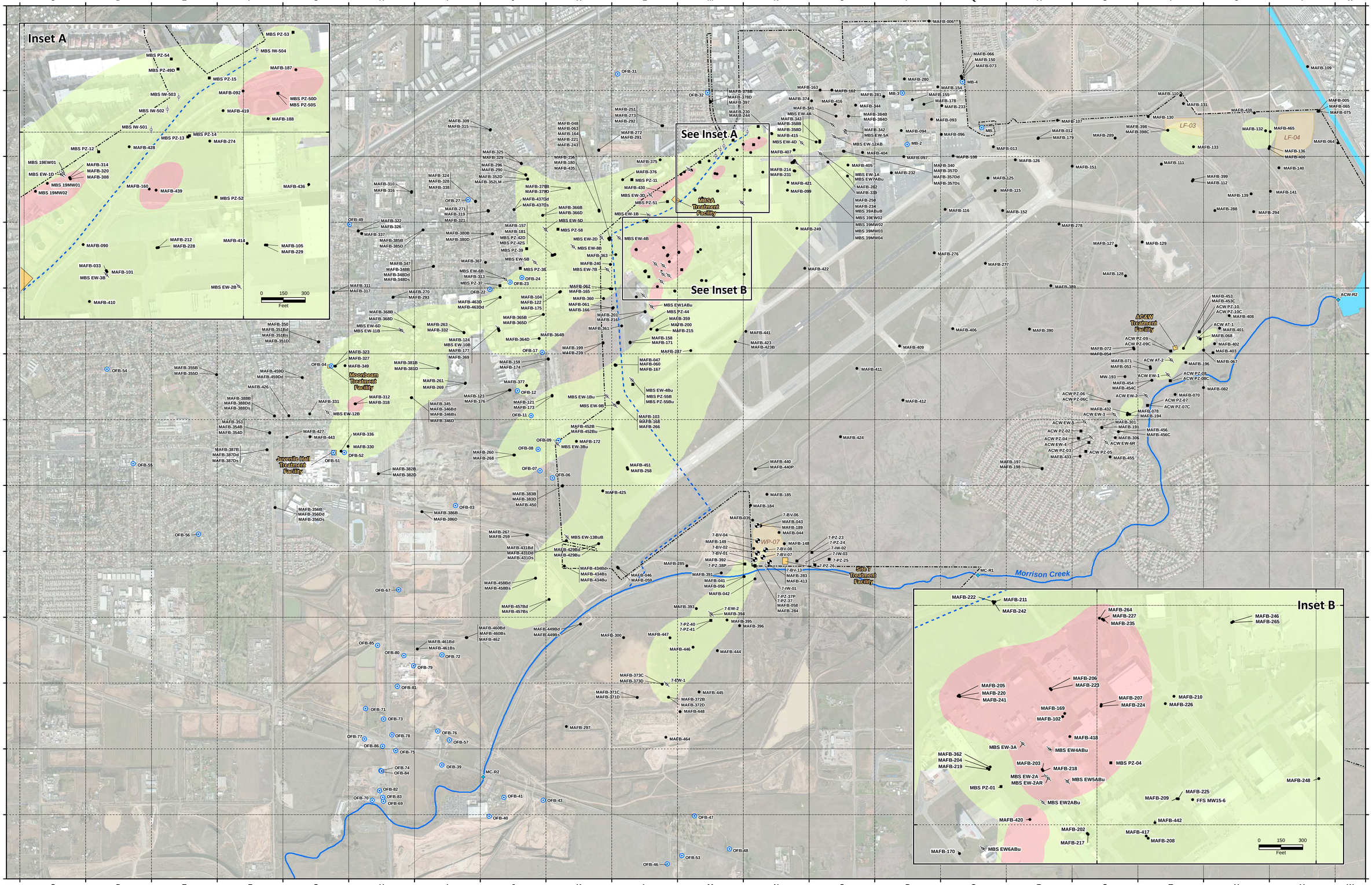

Legend
Mather Boundary
Roads
Groundwater Treatment System
Landfill
SVE/Biovent Treatment System
Site 23
Site 39
Site 18/59
Main Base
SAC Area
Site 57
LF-03
LF-04
Mather
Lake
AC&W
WP-07
Site 7
N
0
750
1,500
Feet
1 inch = 1,500 feet
URS
Site Location Map
Former Mather Air Force Base
Sacramento County, California
Figure
1-2



Modified from: MWH, 2010. *Annual Fourth Quarter 2008 Groundwater Monitoring Program, Mather Air Force Base, Sacramento County, California*. Final. January.

Figure 1-3. Generalized Hydrogeologic Cross-Section North of Runways, Former Mather Air Force Base, Sacramento County, California

Mather\Annual-GW-Report-2010\01-11-Mather-geo-xsec.indd - LCT 03.07.11 SAC



Location	Unit	Grid
7-BV-01	NA	N10
7-BV-02	NA	N10
7-BV-04	NA	N9
7-BV-06	NA	N9
7-BV-07	NA	N10
7-BV-08	NA	N9
7-BV-13	NA	N9
7-IW-1	B	L12
7-IW-2	B	M10
7-IW-01	B	N10
7-IW-02	B	N10
7-IW-03	B	O10
7-PZ-23	B	N10
7-PZ-24	B	O10
7-PZ-25	B	O10
7-PZ-26	B	O10
7-PZ-37	WT/C	N10
7-PZ-37P	PERCHED	N10
7-PZ-38P	PERCHED	N10
7-PZ-40	C	M11
7-PZ-41	C	M11
ACW AT-1	C	T6
ACW AT-2	C	T7
ACW EW-1	C	T7
ACW EW-2	C	T7
ACW EW-3	C	S7
ACW EW-4	C	S8
ACW EW-5	C	S8
ACW EW-6R	C	S8
ACW PZ-02	C	S8
ACW PZ-03	C	S8
ACW PZ-04	C	S8
ACW PZ-05	C	S8
ACW PZ-06	WT/C	S7
ACW PZ-06C	C	S7

Location	Unit	Grid
ACW PZ-07	WT/C	T7
ACW PZ-07C	C	T7
ACW PZ-08	WT/C	T7
ACW PZ-08C	C	T7
ACW PZ-09	WT/C	T6
ACW PZ-09C	C	T6
ACW PZ-10	WT/C	T6
ACW PZ-10C	C	T6
FFS MW15-6	D	M5
MAFB-005	WT/B	V3
MAFB-006	WT/B	P1
MAFB-012	WT/B	R3
MAFB-013	WT/B	Q3
MAFB-033	WT/Bu	M4
MAFB-039	PERCHED	N9
MAFB-041	B	N10
MAFB-042	WT/B	N10
MAFB-043	C	N9
MAFB-044	PERCHED	N9
MAFB-046	PERCHED	L10
MAFB-047	WT/Bu	L7
MAFB-048	WT/A	K5
MAFB-053	C	T7
MAFB-054	WT/C	S6
MAFB-056	D	N10
MAFB-058	D	N10
MAFB-059	B	L10
MAFB-060	D	L7
MAFB-061	D	L6
MAFB-062	D	K6
MAFB-063	D	K5
MAFB-064	D	W3
MAFB-065	D	V3
MAFB-066	Dd	Q2
MAFB-067	D	T6

Location	Unit	Grid
MAFB-068	D	T6
MAFB-070	D	T7
MAFB-071	D	T7
MAFB-072	D	S6
MAFB-073	B	Q2
MAFB-075	WT/B	V3
MAFB-078	D	S7
MAFB-082	WT/C	T7
MAFB-090	WT/Bu	M4
MAFB-092	WT/A	M3
MAFB-093	WT/B	P3
MAFB-094	WT/B	P3
MAFB-096	WT/B	Q3
MAFB-097	WT/B	P4
MAFB-099	WT/A	N4
MAFB-101	B	M4
MAFB-102	D	L5
MAFB-103	D	L7
MAFB-104	D	K6
MAFB-105	WT/A	N4
MAFB-107	WT/B	R3
MAFB-108	WT/B	Q3
MAFB-109	WT/C	V2
MAFB-110	WT/B	T3
MAFB-111	WT/B	T4
MAFB-112	WT/C	T4
MAFB-115	WT/B	Q4
MAFB-116	WT/B	Q4
MAFB-123	WT/A	K7
MAFB-122	WT/A	K6
MAFB-123	WT/A	J7
MAFB-124	WT/A	J6
MAFB-125	WT/B	Q4
MAFB-126	WT/B	R4
MAFB-127	WT/C	S5

Location	Unit	Grid
MAFB-128	WT/B	S5
MAFB-129	WT/C	T5
MAFB-130	WT/B	T3
MAFB-131	WT/B	U3
MAFB-132	WT/C	U1
MAFB-133	WT/C	T3
MAFB-136	WT/C	V3
MAFB-139	WT/C	U4
MAFB-140	WT/C	V4
MAFB-141	WT/C	V4
MAFB-148	B	N9
MAFB-149	WT/B	N9
MAFB-150	WT/B	Q2
MAFB-151	WT/B	S4
MAFB-152	WT/B	Q4
MAFB-154	WT/B	P2
MAFB-155	WT/B	P3
MAFB-156	WT/A	K4
MAFB-157	WT/A	K5
MAFB-158	WT/Bu	L6
MAFB-159	WT/A	K7
MAFB-160	WT/A	M4
MAFB-162	WT/A	O2
MAFB-163	WT/A	O2
MAFB-164	B	K5
MAFB-165	B	K6
MAFB-166	B	L6
MAFB-167	B	L7
MAFB-168	WT/Bu	L7
MAFB-169	B	L5
MAFB-170	B	L6
MAFB-171	B	L6
MAFB-172	WT/Bu	K8
MAFB-173	B	K7
MAFB-174	Bu	K7

Location	Unit	Grid
MAFB-175	B	K6
MAFB-176	Bu	J7
MAFB-177	B	J6
MAFB-178	D	P3
MAFB-179	D	R3
MAFB-180	D	K4
MAFB-181	D	K5
MAFB-184	PERCHED	N9
MAFB-185	PERCHED	N9
MAFB-187	WT/A	N3
MAFB-188	WT/A	N3
MAFB-189	PERCHED	N9
MAFB-191	D	S8
MAFB-193	C	S7
MAFB-194	C	S7
MAFB-196	C	T7
MAFB-197	WT/C	R8
MAFB-198	C	R8
MAFB-199	WT/Bu	K6
MAFB-200	WT/A	L6
MAFB-201	WT/Bu	L6
MAFB-202	WT/A	L6
MAFB-203	WT/A	L5
MAFB-204	WT/A	L5
MAFB-205	WT/A	L5
MAFB-206	WT/A	L5
MAFB-207	WT/A	M5
MAFB-208	WT/A	M5
MAFB-209	WT/A	M5
MAFB-210	WT/A	M5
MAFB-211	WT/A	L4
MAFB-212	WT/A	M4
MAFB-214	WT/A	N4
MAFB-215	B	L6
MAFB-216	B	L6

Location	Unit	Grid
MAFB-217	B	L6
MAFB-218	B	L5
MAFB-219	B	L5
MAFB-220	B	L5
MAFB-221	Bu	K5
MAFB-222	B	L4
MAFB-223	B	L5
MAFB-224	B	M5
MAFB-225	B	M5
MAFB-226	B	M5
MAFB-227	B	M5
MAFB-228	B	M4
MAFB-229	B	N4
MAFB-230	B	N3
MAFB-231	B	N4
MAFB-232	WT/B	P4
MAFB-233	WT/B	Q3
MAFB-234	B	N4
MAFB-235	D	M5
MAFB-239	D	K6
MAFB-240	D	K5
MAFB-241	D	L5
MAFB-242	D	L4
MAFB-243	D	K5
MAFB-244	WT/A	N3
MAFB-246	WT/Bu	M5
MAFB-247	WT/B	M6
MAFB-248	WT/B	N5
MAFB-249	B	M5
MAFB-250	D	N4
MAFB-251	WT/A	L3
MAFB-258	WT/Bu	L8
MAFB-259	Bu	J9
MAFB-260	Bu	J8
MAFB-261	Bu	I7

Location	Unit	Grid
MAFB-263	Bu	I6
MAFB-264	WT/Bu	M5
MAFB-265	B	M5
MAFB-266	B	L7
MAFB-267	B	J9
MAFB-268	B	J8
MAFB-269	B	I7
MAFB-270	B	H6
MAFB-271	B	J4
MAFB-272	B	K3
MAFB-273	B	L3
MAFB-274	B	M4
MAFB-276	WT/B	P5
MAFB-277	WT/B	Q5
MAFB-278	WT/B	R5
MAFB-280	B	P2
MAFB-281	B	P3
MAFB-282	B	Q4
MAFB-283	B	N10
MAFB-284	B	N10
MAFB-285	C	M10
MAFB-288	B	U4
MAFB-289	WT/B	S3
MAFB-290	D	J4
MAFB-291	D	K3
MAFB-292	D	L3
MAFB-293	D	H6
MAFB-294	D	U4
MAFB-296	D	J4
MAFB-297	C	K12
MAFB-300	C	L11
MAFB-301	C	S8
MAFB-306	C	S8
MAFB-308	B	M4
MAFB-309	B	J3

Location	Unit	Grid
MAFB-310	B	H4
MAFB-311	B	G6
MAFB-312	B	H7
MAFB-313	B	J5
MAFB-314	D	M4
MAFB-315	D	J3
MAFB-316	D	H4
MAFB-317	D	G6
MAFB-318	D	H7
MAFB-319	D	J4
MAFB-320	D	M4
MAFB-321	Dd	J4
MAFB-322	B	H5
MAFB-323	B	G7
MAFB-324	B	I4
MAFB-325	B	J4
MAFB-326	D	H5
MAFB-327	D	G7
MAFB-328	D	I4
MAFB-329	D	J4
MAFB-330	B	G8
MAFB-331	B	G7
MAFB-332	D	I6
MAFB-336	D	G8
MAFB-337	Dd	H5
MAFB-338	Dd	I4
MAFB-339	WT/B	Q4
MAFB-340	WT/B	O3
MAFB-341	WT/B	O3
MAFB-342	WT/B	O3
MAFB-343	WT/B	O3
MAFB-344	WT/B	O3
MAFB-345	Dd	H7
MAFB-346Bd	Bd	H7
MAFB-346Bs	Bs	H7

Location	Unit	Grid
MAFB-346D	D	H7
MAFB-347	LMT	I5
MAFB-348B	B	I5
MAFB-348Dd	Dd	I5
MAFB-348Ds	Ds	I5
MAFB-349	LMT	G7
MAFB-350	LMT	G6
MAFB-351Bd	Bd	G6
MAFB-351Bs	Bs	G6
MAFB-351D	D	G6
MAFB-352D	Dd	J4
MAFB-352LM	LMT	J4
MAFB-353	LMT	F8
MAFB-354B	B	F8
MAFB-354D	D	F8
MAFB-355B	B	E7
MAFB-355D	D	E7
MAFB-356B	B	F9
MAFB-356Dd	Dd	F9
MAFB-356Ds	Ds	F9
MAFB-357D	D	O3
MAFB-357Dd	Dd	O3
MAFB-357Ds	Ds	O3
MAFB-358B	B	O3
MAFB-358D	D	O3
MAFB-359	WT/Bu	L6
MAFB-360	B	K6
MAFB-361	B	L6
MAFB-362	B	L5
MAFB-363	B	L5
MAFB-364B	B	J6
MAFB-364D	D	J6
MAFB-365B	B	J6
MAFB-365D	D	J6
MAFB-366B	B	J4

Location	Unit	Grid
MAFB-366D	D	J4
MAFB-367	D	J5
MAFB-368B	B	H6
MAFB-368D	D	H6
MAFB-369	D	J6
MAFB-371C	C	L12
MAFB-371D	D	L12
MAFB-372B	B	L12
MAFB-372D	D	L12
MAFB-373C	C	L12
MAFB-373D	D	L12
MAFB-374	D	O3
MAFB-375	D	L4
MAFB-376	D	L4
MAFB-377	D	J7
MAFB-378B	B	M3
MAFB-378D	D	M3
MAFB-379B	B	K4
MAFB-379D	D	K4
MAFB-380B	B	J5
MAFB-380D	D	J5
MAFB-381B	B	I7
MAFB-381D	D	I7
MAFB-382B	B	H8
MAFB-382D	D	H8
MAFB-383B	B	K9
MAFB-383D	D	K9
MAFB-384B	WT/B	O3
MAFB-384D	D	O3
MAFB-385B	B	I5
MAFB-385D	D	I5
MAFB-386B	B	I9
MAFB-386D	D	I9
MAFB-387B	B	F8
MAFB-387Dd	Dd	F8

Location	Unit	Grid
MAFB-387Ds	Ds	F8
MAFB-388B	B	F7
MAFB-388Dd	Dd	F7
MAFB-388Ds	Ds	F7
MAFB-389	WT/B	R5
MAFB-390	WT/B	R6
MAFB-391	C	M10
MAFB-392	C	N10
MAFB-393	C	M10
MAFB-394	C	M10
MAFB-395	C	M11
MAFB-396	B	M11
MAFB-397	Dd	M3
MAFB-398	WT/B	T3
MAFB-398C	C	T3
MAFB-399	C	T4
MAFB-400	C	U3
MAFB-401	WT/C	U6
MAFB-402	WT/C	U6
MAFB-403	WT/C	U6
MAFB-404	WT/B	O3
MAFB-405	WT/B	O4
MAFB-406	WT/B	Q6
MAFB-407	WT/Bu	N3
MAFB-408	WT/C	U6
MAFB-409	WT/B	P6
MAFB-410	WT/A	M4
MAFB-411	WT/B	O7
MAFB-412	WT/B	P7
MAFB-413	WT/B	N10
MAFB-414	WT/A	N4
MAFB-415	WT/B	O3
MAFB-416	WT/B	O3
MAFB-417	WT/B	M6
MAFB-418	WT/A	L5

Location	Unit	Grid
MAFB-419	WT/B	M3
MAFB-420	WT/A	L5
MAFB-421	WT/B	N4
MAFB-422	WT/Bu	N5
MAFB-423	WT/Bu	M6
MAFB-423B	B	M6
MAFB-424	WT/C	O8
MAFB-425	WT/A	K9
MAFB-426	B	G7
MAFB-427	B	G8
MAFB-428	WT/B	M4
MAFB-429Bd	Bd	K9
MAFB-429Bs	Bs	K9
MAFB-429Bu	WT/Bu	K9
MAFB-430	LMT	L4
MAFB-431Bd	Bd	K9
MAFB-431Dd	Dd	K9
MAFB-431Ds	Ds	K9
MAFB-432	WT/C	S7
MAFB-433	WT/C	S8
MAFB-434Bd	Bd	K10
MAFB-434Bs	Bs	K10
MAFB-434Bu	WT/Bu	K10
MAFB-435	Dd	N4
MAFB-436	WT/B	N4
MAFB-437Dd	Dd	J4
MAFB-437Ds	Ds	J4
MAFB-438	B	I5
MAFB-439	B	I5
MAFB-440	WT/A	M4
MAFB-440P	PERCHED	N8
MAFB-441	D	M6
MAFB-442	D	M5
MAFB-443	D	G8
MAFB-444	B	M11

Location	Unit	Grid
MAFB-445	B	M12
MAFB-446	C	M11
MAFB-447	C	L11
MAFB-448	B	M12
MAFB-449Bd	Bd	K11
MAFB-449Bs	Bs	K11
MAFB-450	WT/Bu	K9
MAFB-451	B	L8
MAFB-452	B	L8
MAFB-452Bu	WT/Bu	L8
MAFB-453	C	T6
MAFB-453C	C	T6
MAFB-454	WT/C	T7
MAFB-454C	C	T7
MAFB-455	WT/C	S8
MAFB-456	WT/C	S8
MAFB-456C	C	S8
MAFB-457Bd	Bd	K10
MAFB-457Bs	Bs	K10
MAFB-458Bd	Bd	J10
MAFB-458Bs	Bs	J10
MAFB-459D	D	G7
MAFB-459Dd	Dd	G7
MAFB-460Bd	Bd	I11
MAFB-460Bs	Bs	I11
MAFB-461Bd	Bd	I11
MAFB-461Bs	Bs	I11
MAFB-462	B	I11
MAFB-463D	D	J6
MAFB-463Dd	Dd	J6
MAFB-464	D	L12
MB-1	NA	Q3
MB-2	NA	P3
MB-3	NA	P3
MB-4	NA	Q2

Location	Unit	Grid
MBS 19EW01	B	M4
MBS 19MW01	Bu	M4
MBS 19MW02	Bu	M4
MBS 39MW01	WT/B	N4
MBS 39EW02	B	N4
MBS 39MW02	WT/A	N4
MBS 39MW03	Bu	N4
MBS 39MW04	Bu	N4
MBS EW-1B	B	J6
MBS EW-1BU	WT/Bu	L6
MBS EW-1R	B	H6
MBS EW-12AB	WT/B	O3
MBS EW-12B	B	G7
MBS EW-13BuB	Bu	K9
MBS EW-1A	WT/A	O3
MBS EW1ABu	WT/Bu	L6
MBS EW-1B	WT/Bu	K7
MBS EW-1D	D	M4
MBS EW-2A	WT/A	L5
MBS EW2ABu	WT/Bu	L5
MBS EW-2B	B	M4
MBS EW-2R	WT/A	L5
MBS EW-3A	WT/A	L5
MBS EW-3B	B	M4
MBS EW-3Bu	Bu	K8
MBS EW-3D	D	L4
MBS EW-4A	WT/B	O3
MBS EW4ABu	WT/Bu	L5
MBS EW-4B	B	L5
MBS EW-4Bu	WT/Bu	L7
MBS EW-5A	D	K5
MBS EW-5B	B	J5

Location	Unit	Grid
MBS EW-5D	D	J5
MBS EW6ABu	WT/A/Bu	L6
MBS EW-6B	B	J5
MBS EW-6D	D	H6
MBS EW7ABu	WT/Bu	O3
MBS EW-7B	B	K5
MBS EW-8B	B	L7
MBS EW-8D	B	J6
MBS EW-9D	D	J5
MBS EW-9R	B	L7
MBS EW-10B	B	J6
MBS EW-11B	B	H6
MBS EW-12AB	WT/B	O3
MBS EW-12B	B	G7
MBS EW-13BuB	Bu	K9
MBS EW-1A	WT/A	O3
MBS EW1ABu	WT/Bu	L6
MBS EW-1B	B	L4
MBS EW-1Bu	WT/Bu	K7
MBS EW-1D	D	M4
MBS EW-2A	WT/A	L5
MBS EW2ABu	WT/Bu	L5
MBS EW-2B	B	M4
MBS EW-2R	WT/A	L5
MBS EW-3A	WT/A	L5
MBS EW-3B	B	M4
MBS EW-3Bu	Bu	K8
MBS EW-3D	D	L4
MBS EW-4A	WT/B	O3
MBS EW4ABu	WT/Bu	L5
MBS EW-4B	B	L5
MBS EW-4Bu	WT/Bu	L7
MBS EW-5A	WT/B	O3
MBS EW5ABu	WT/Bu	L5
MBS EW-5B	B	J5

Location	Unit	Grid
MBS EW-5D	D	J5
MBS EW6ABu	WT/A/Bu	L6
MBS EW-6B	B	J5
MBS EW-6D	D	H6
MBS EW7ABu	WT/Bu	O3
MBS EW-7B	B	K5
MBS EW-8B	B	L7
MBS EW-8D	B	J6
MBS EW-9D	D	J5
MBS EW-9R	B	L7
MBS EW-10B	B	J6
MBS EW-11B	B	H6
MBS EW-12AB	WT/B	O3
MBS EW-12B	B	G7
MBS EW-13BuB	Bu	K9
MBS EW-1A	WT/A	O3
MBS EW1ABu	WT/Bu	L6
MBS EW-1B	B	L4
MBS EW-1Bu	WT/Bu	K7
MBS EW-1D	D	M4
MBS EW-2A	WT/A	L5
MBS EW2ABu	WT/Bu	L5
MBS EW-2B	B	M4
MBS EW-2R	WT/A	L5
MBS EW-3A	WT/A	L5
MBS EW-3B	B	M4
MBS EW-3Bu	Bu	K8
MBS EW-3D	D	L4
MBS EW-4A	WT/B	O3
MBS EW4ABu	WT/Bu	L5
MBS EW-4B	B	L5
MBS EW-4Bu	WT/Bu	L7
MBS EW-5A	WT/B	O3
MBS EW5ABu	WT/Bu	L5
MBS EW-5B	B	J5

Location	Unit	Grid
MBS PZ-01	NA	I9
MBS PZ-04	NA	G7
MBS PZ-05	NA	K8
MBS PZ-06	NA	J8
MBS PZ-07	NA	J8
MBS PZ-08	NA	K8
MBS PZ-09	NA	J7
MBS PZ-10	NA	J7
MBS PZ-11	NA	J6
MBS PZ-12	NA	J7
MBS PZ-13	NA	J6
MBS PZ-14	NA	J6
MBS PZ-15	NA	J7
MBS PZ-17	NA	J6
MBS PZ-18	NA	J6
MBS PZ-19	NA	J6
MBS PZ-20	NA	J5
MBS PZ-21	NA	J5
MBS PZ-23	NA	J5
MBS PZ-24	NA	J5
MBS PZ-27	NA	I4
MBS PZ-31	NA	L2
MBS PZ-32	NA	M3
MBS PZ-39	NA	I13
MBS PZ-40	NA	J14
MBS PZ-41	NA	J13
MBS PZ-43	NA	J13
MBS PZ-46	NA	L14
MBS PZ-47	NA	M14
MBS PZ-48	NA	M14
MBS PZ-49	NA	H5
MBS PZ-51	NA	G8
MBS PZ-52	NA	G8
MBS PZ-53	NA	M14
MBS PZ-54	NA	D7
MBS PZ-55	NA	D8
MBS PZ-56	NA	E9
MBS PZ-57	NA	I12
MBS PZ-58	NA	H10
MBS PZ-59	NA	I9
MBS PZ-59B	NA	H13
MBS PZ-59C	NA	I11
MBS PZ-59D	NA	I11
MBS PZ-59E	NA	I11
MBS PZ-59F	NA	I11

Location	Unit	Grid
OFB-03	NA	I9
OFB-04	NA	G7
OFB-06	NA	K8
OFB-07	NA	J8
OFB-08	NA	J8
OFB-09	NA	K8
OFB-11	NA	J7
OFB-12	NA	J7
OFB-17	NA	J6
OFB-22	NA	J6
OFB-23	NA	J5
OFB-24	NA	J5
OFB-27	NA	I4
OFB-31	NA	L2
OFB-32	NA	M3
OFB-39	NA	I13
OFB-40	NA	J14
OFB-41	NA	J13
OFB-43	NA	J13
OFB-46	NA	L14
OFB-47	NA	M14
OFB-48	NA	M14
OFB-49	NA	H5
OFB-51	NA	G8
OFB-52	NA	G8
OFB-53	NA	M14
OFB-54	NA	D7
OFB-55	NA	D8
OFB-56	NA	E9
OFB-57	NA	I12
OFB-67	NA	H10
OFB-69	NA	H13
OFB-70	NA	H13
OFB-71	NA	H12
OFB-72	NA	I11

Location	Unit	Grid
OFB-73	NA	H12
OFB-74	NA	H13
OFB-75	NA	H13
OFB-76	NA	I12
OFB-77	NA	H12
OFB-78	NA	H12
OFB-79	NA	H13
OFB-80	NA	H11
OFB-81	NA	I12
OFB-82	NA	H13
OFB-83	NA	H13
OFB-84	NA	H13
OFB-85	NA	H11
OFB-86	NA	H12

Legend

- Extraction Well
- Injection Well
- Monitoring Well
- Private Well
- Piezometer
- Soil Vapor Well
- Surface Water Sampling Location
- Mather Boundary
- Treatment System
- Landfills (Capped)
- Canal/Water Body
- Morrison Creek
- Drainage Canal
- **2012 Hot Spot Plume**
  50 µg/L - TCE/PCE
  5.0 µg/L - CCl4
- **2012 MCL Plume**
  5.0 µg/L - TCE/PCE and 1,2 DCA
  0.5 µg/L - CCl4
  6.0 µg/L - cis-1,2-DCE

URS

Groundwater Monitoring Well and Plume Location Map
Annual 2012

Former Mather Air Force Base
Sacramento County, California

2-1

Map: L:\Projects\Mather\Groundwater\2012\GW2012_Plume Location 2012_HIGHT_HERSON.mxd AMH 05.07.2013 SAC
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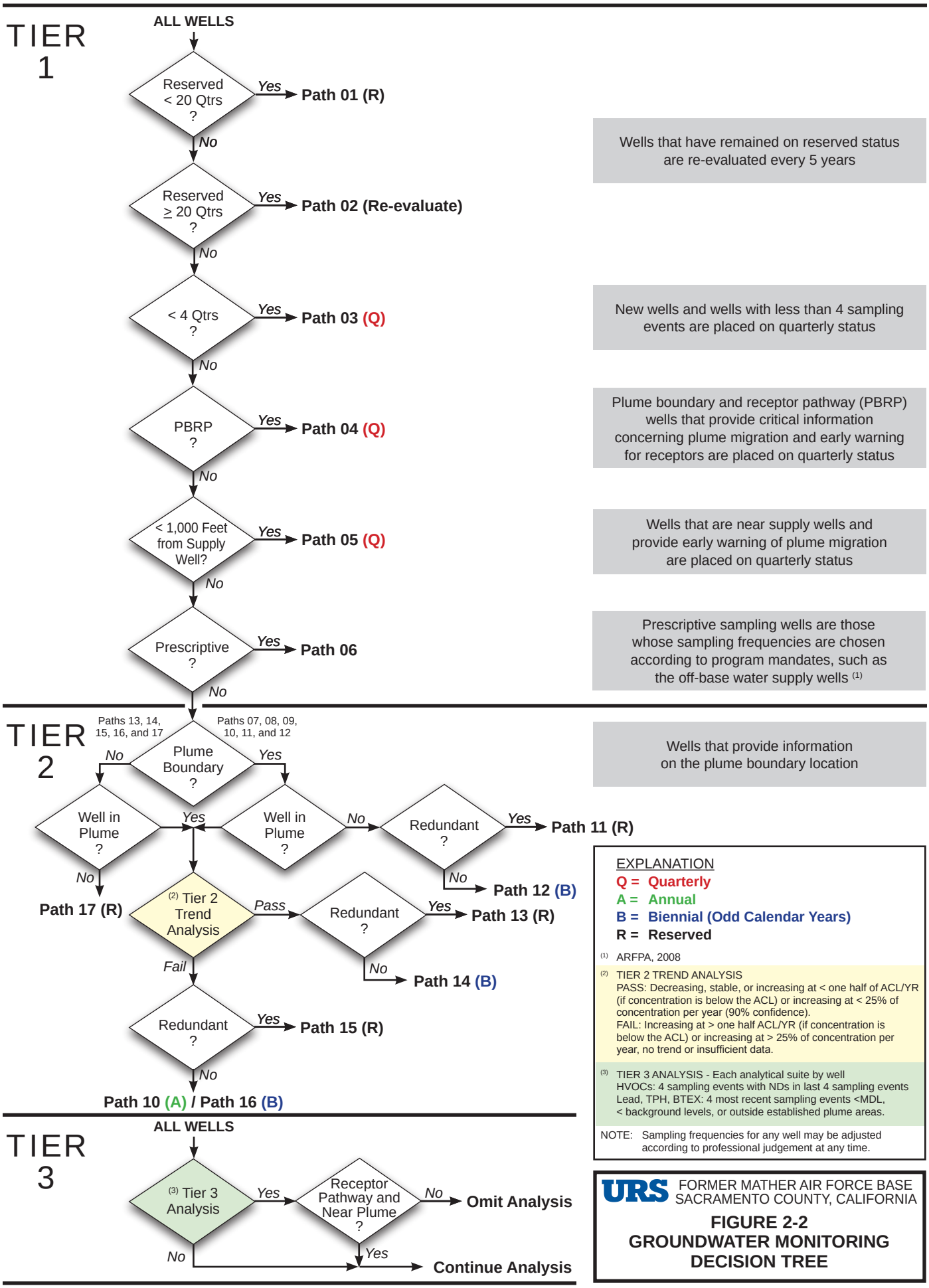

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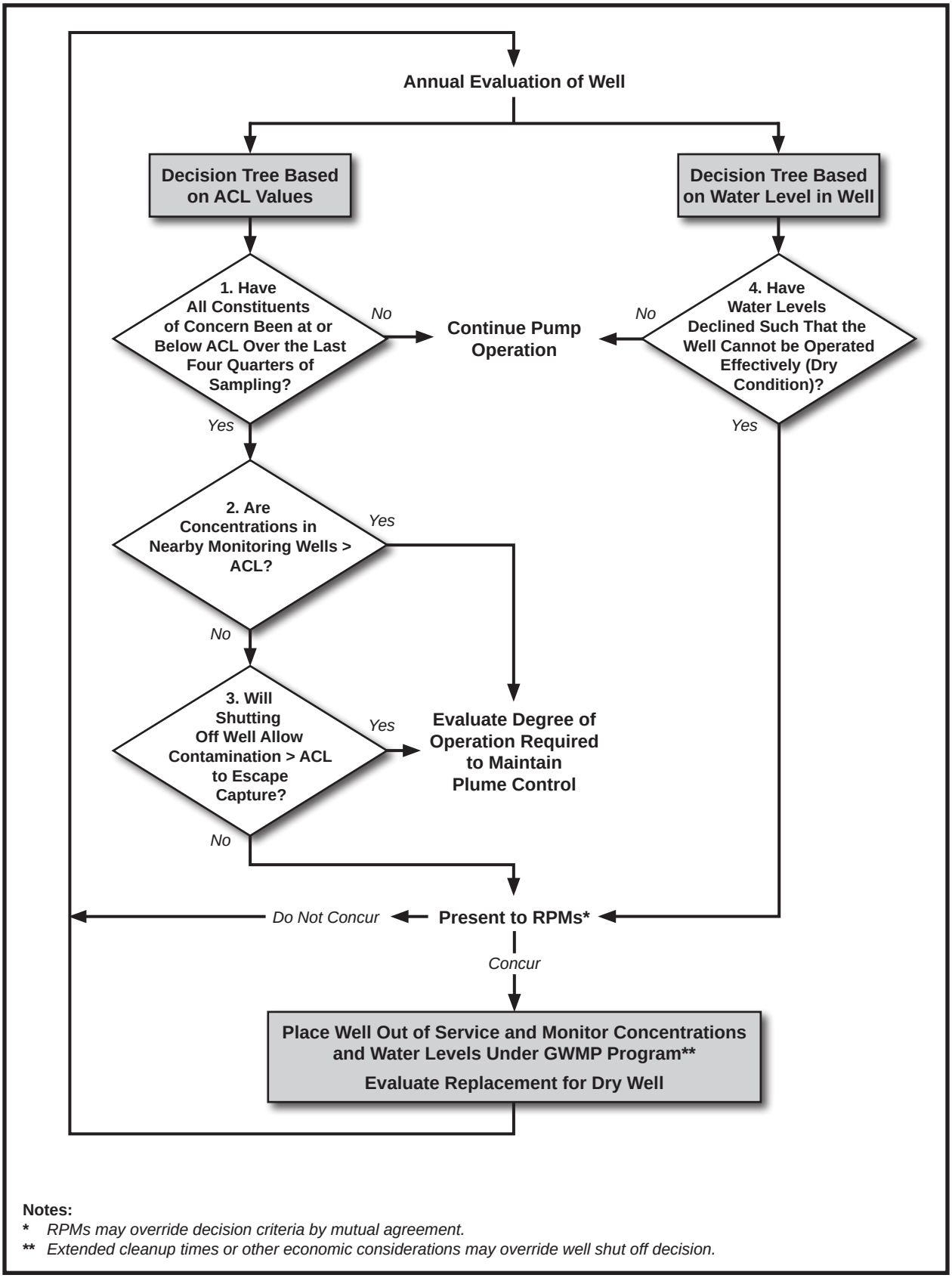

Notes:

* *RPMs may override decision criteria by mutual agreement.*

** *Extended cleanup times or other economic considerations may override well shut off decision.*

Mather\01-13-Annual-Mather-EWS-flowchart.indd - LCT 04.19.13 SAC

Figure 2-3. Extraction Well Shutdown Decision Tree, Former Mather Air Force Base, Sacramento County, California

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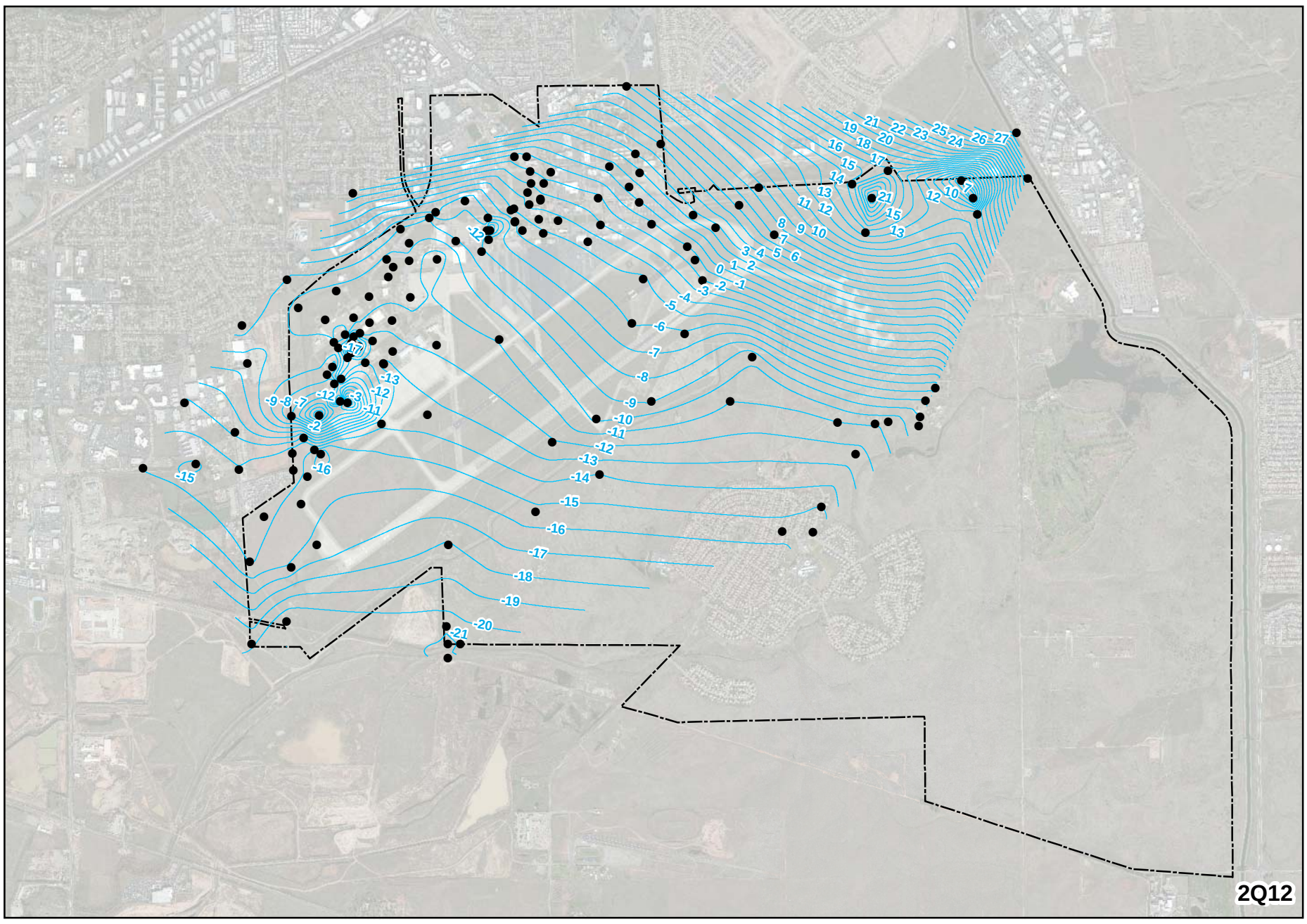

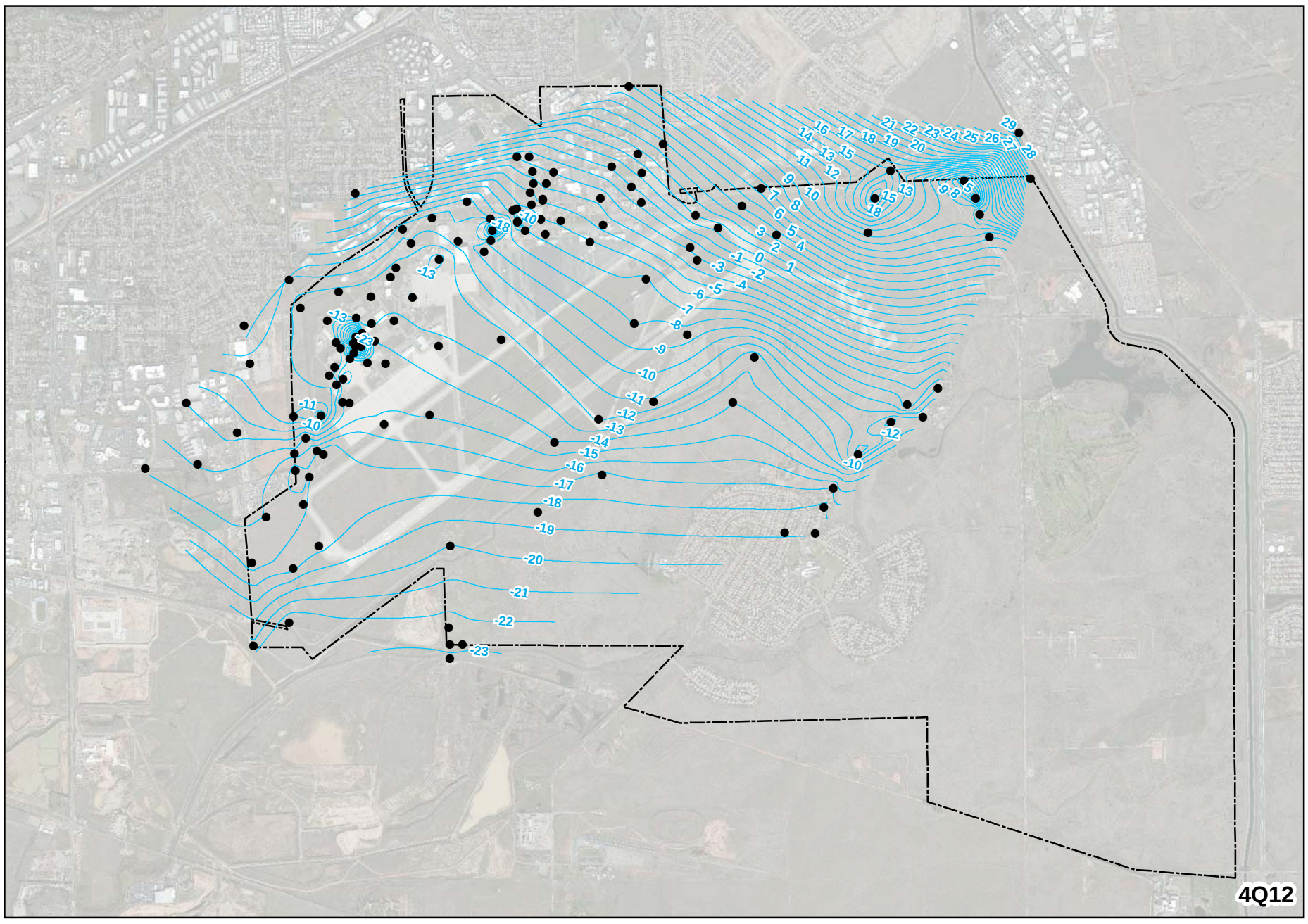

- Groundwater Wells Used in Analysis
- Mather Boundary
- Water Table Surface Contours (ft msl)

N

0 1,500 3,000

Feet

1 inch = 3,000 feet

URS

Second and Fourth Quarter 2012
Water Table
Surface Contours

Former Mather Air Force Base
Sacramento County, California

Figure 2-4

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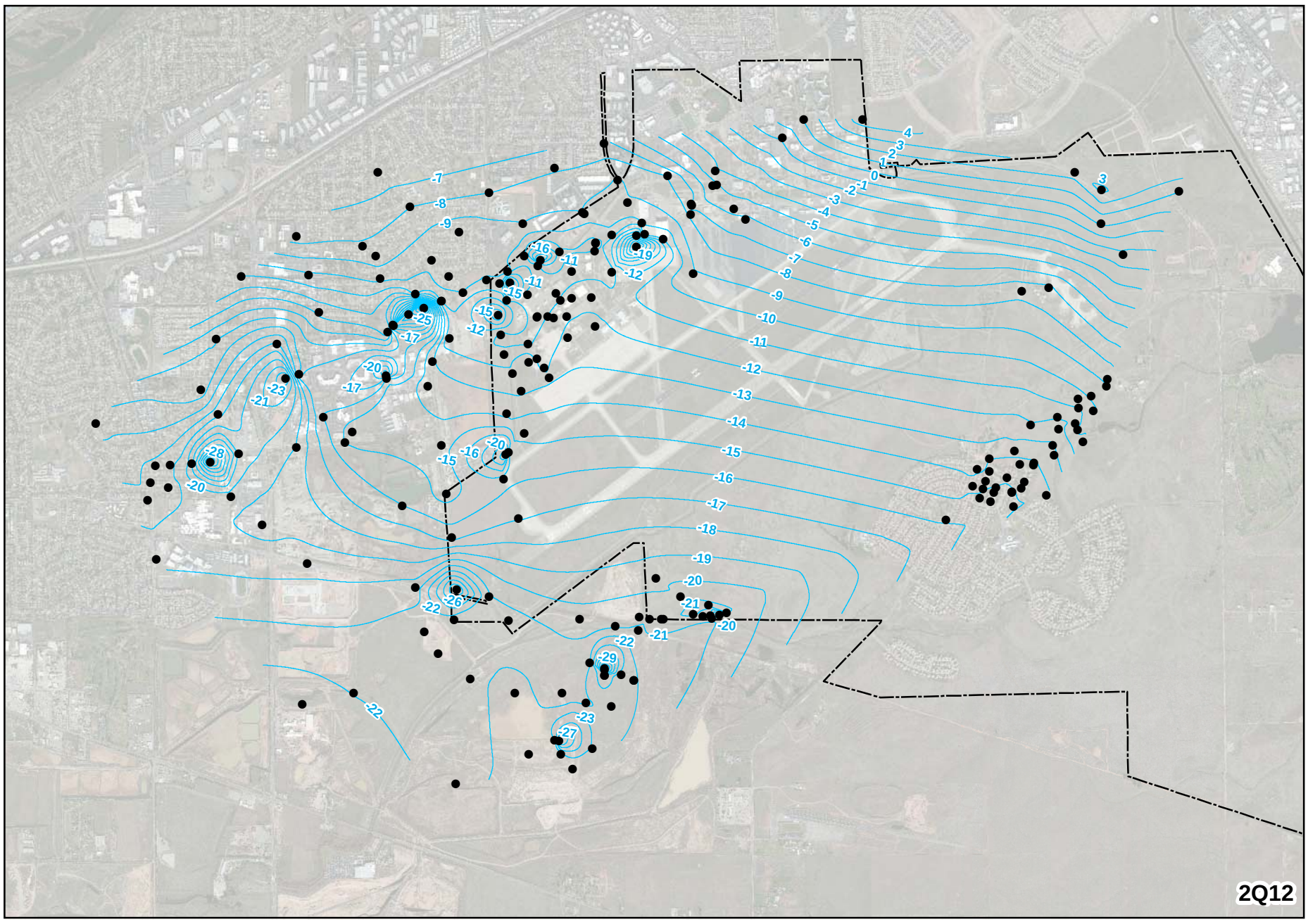

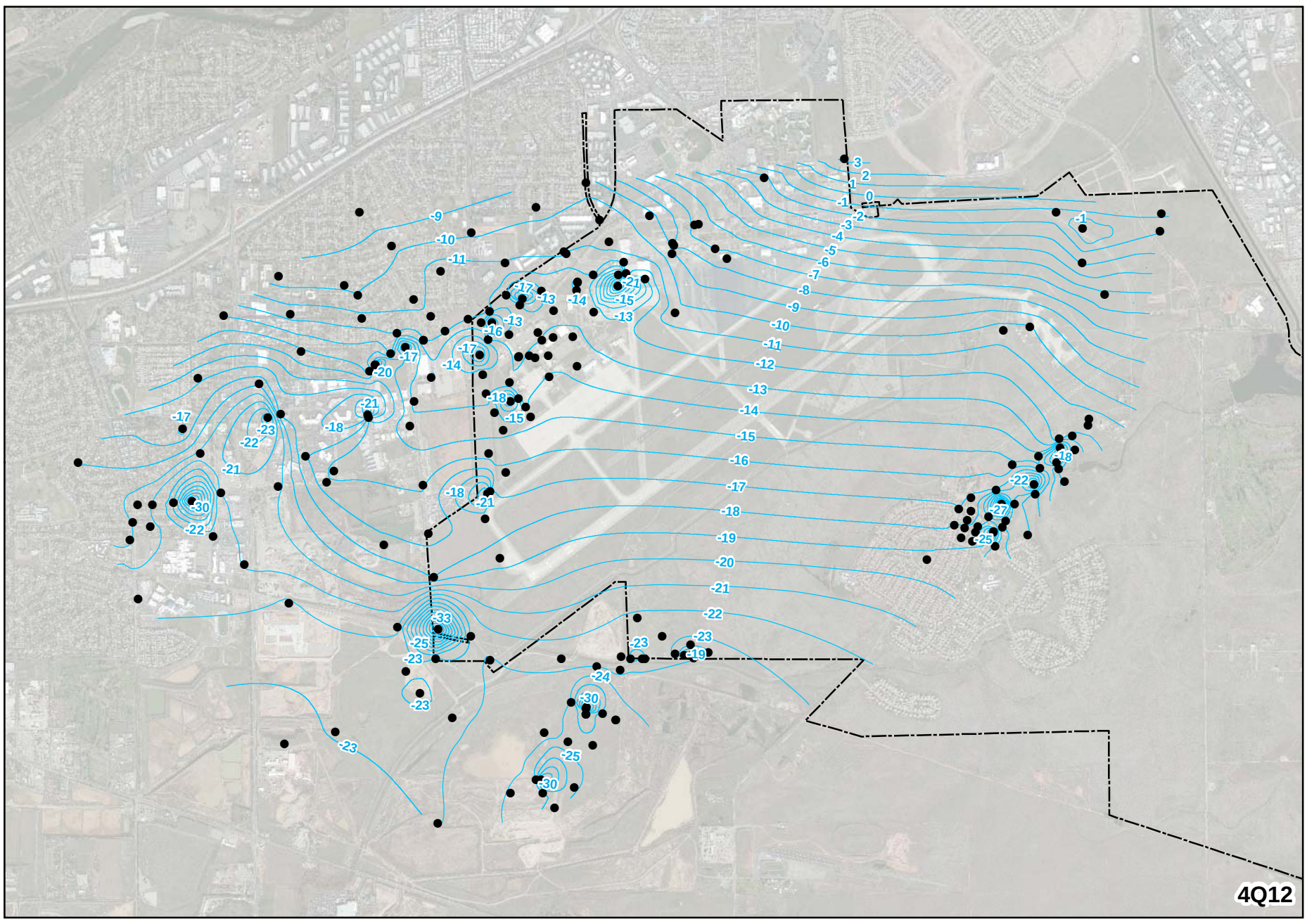

- Groundwater Wells Used in Analysis
- Mather Boundary
- Unit B/C Potentiometric Surface Contours (ft msl)

N

0 1,500 3,000

Feet

1 inch = 3,000 feet

URS

Second and Fourth Quarter 2012 Unit B/C Potentiometric Surface Contours

Former Mather Air Force Base
Sacramento County, California

Figure 2-5

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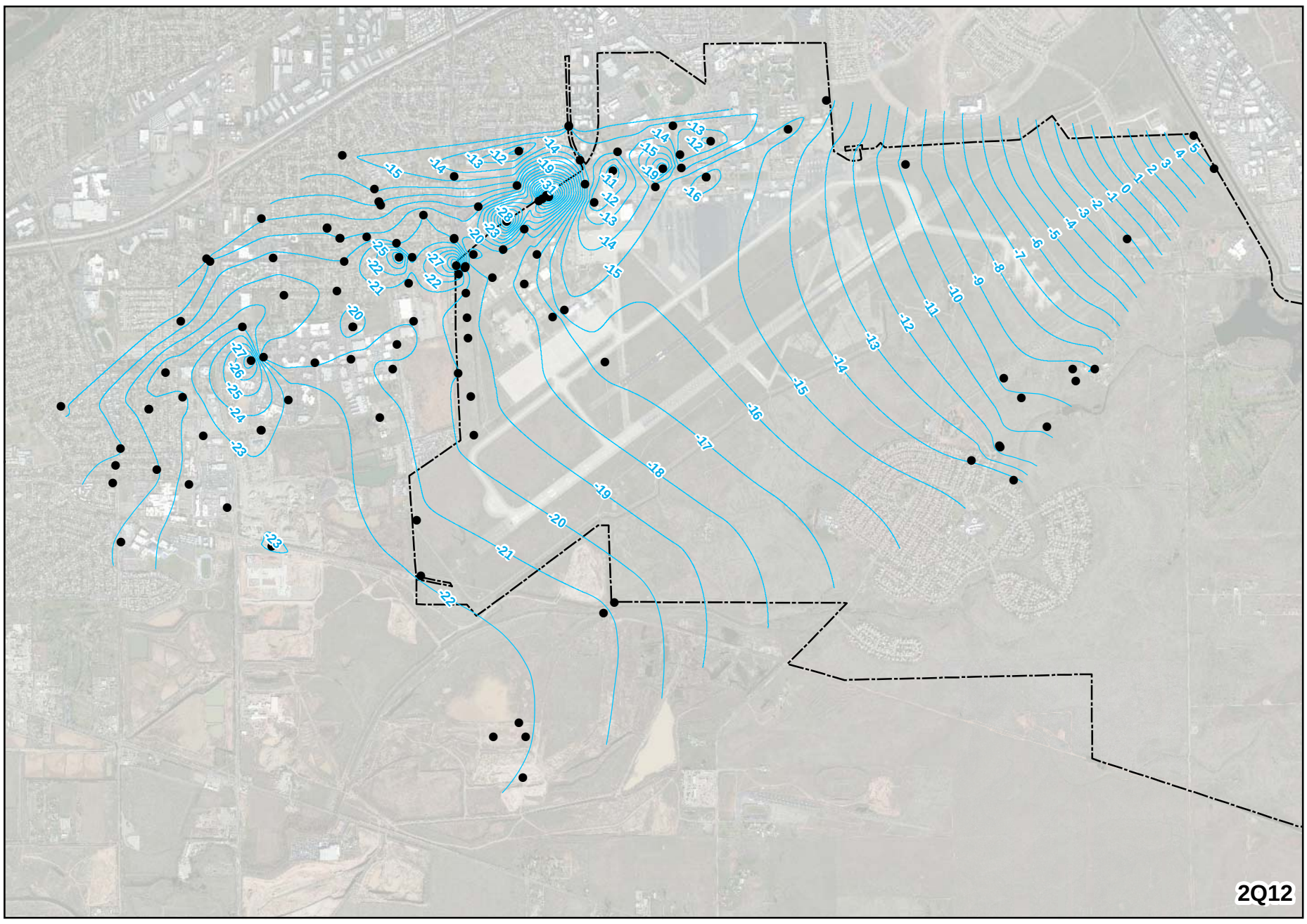
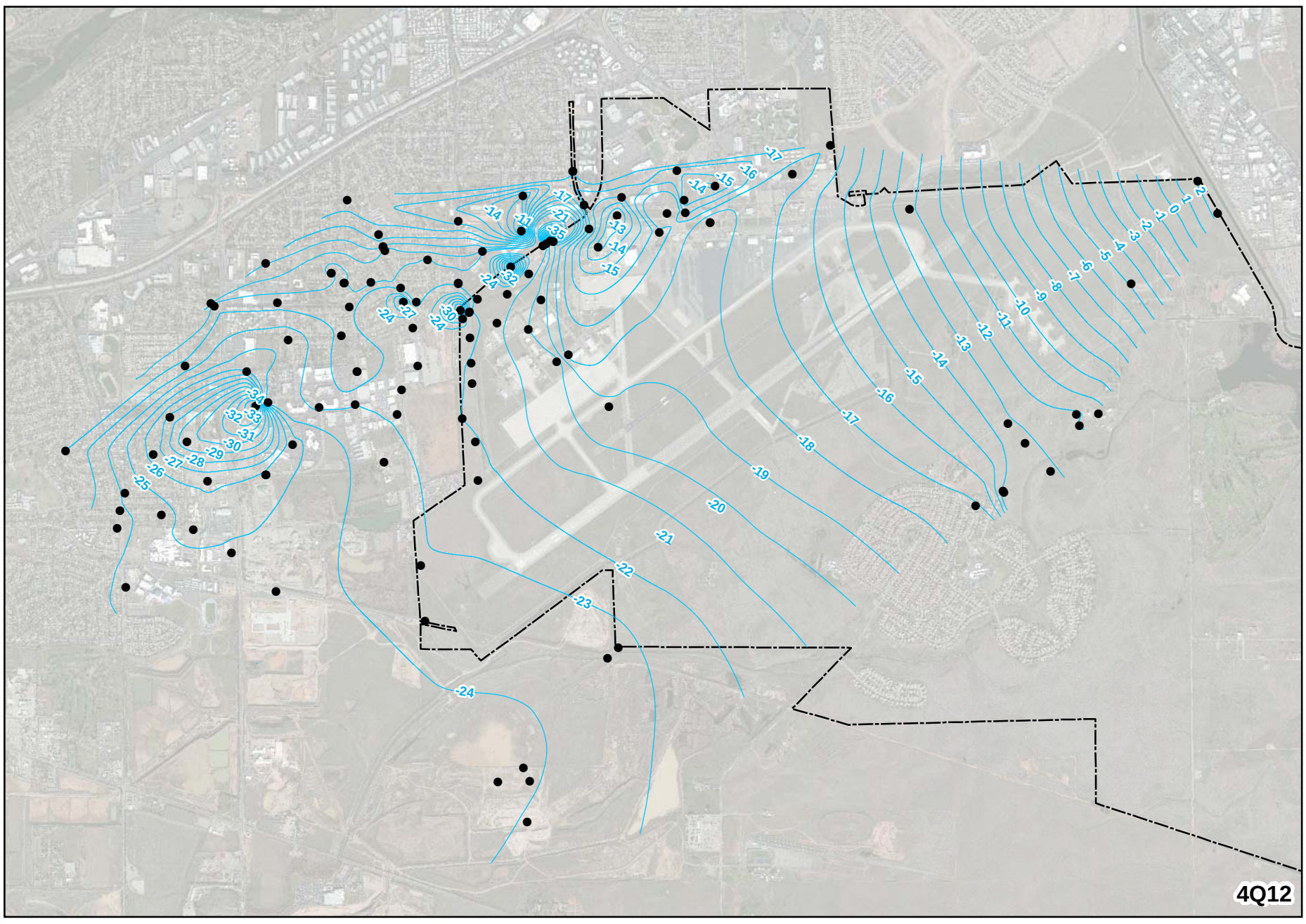




- Groundwater Wells Used in Analysis
- Mather Boundary
- Unit D Potentiometric Surface Contours (ft msl)

N

0 1,500 3,000

Feet

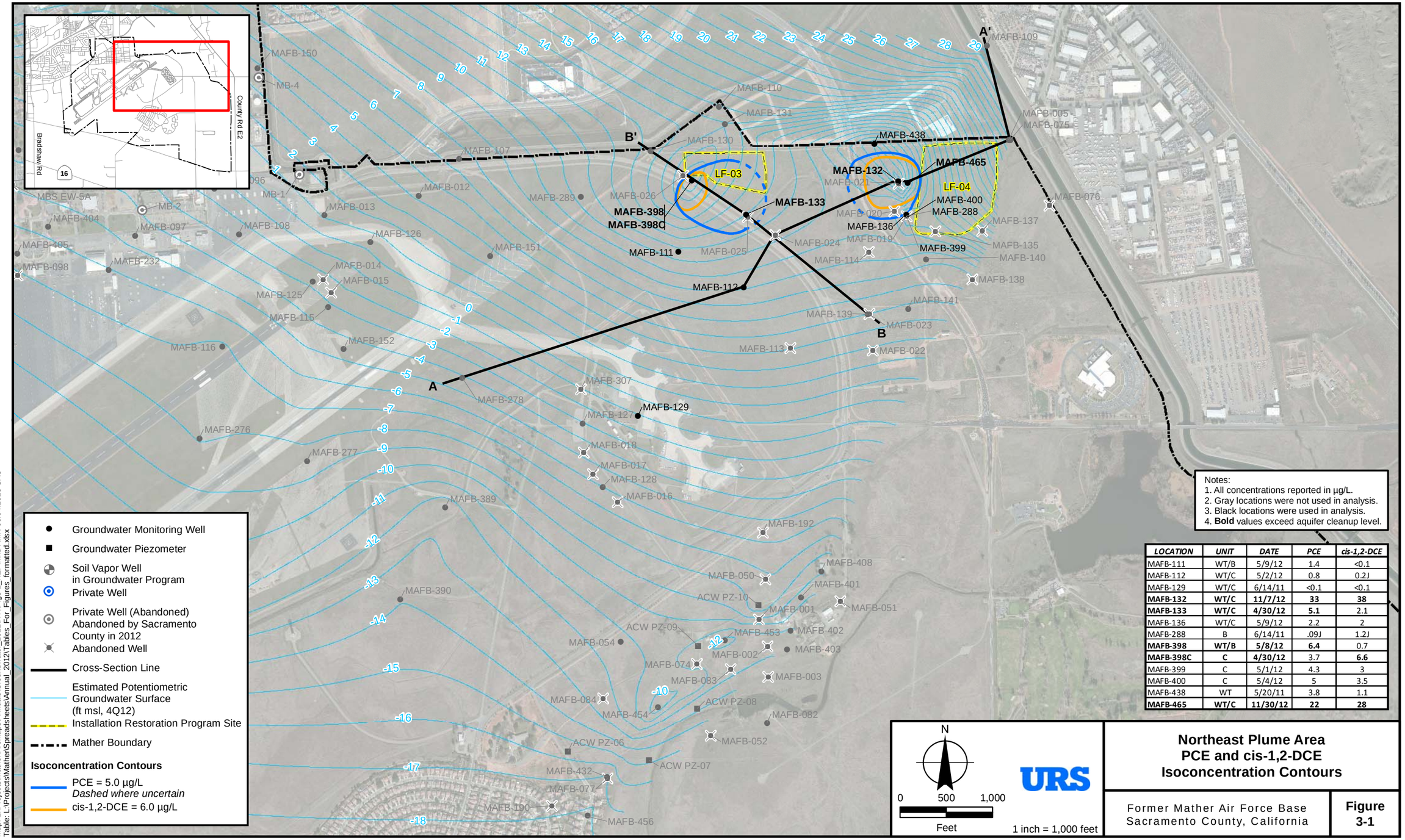
1 inch = 3,000 feet

URS

Second and Fourth Quarter 2012
Unit D Potentiometric
Surface Contours

Former Mather Air Force Base
Sacramento County, California

Figure 2-6



Notes:
1. All concentrations reported in µg/L.
2. Gray locations were not used in analysis.
3. Black locations were used in analysis.
4. **Bold** values exceed aquifer cleanup level.

LOCATION	UNIT	DATE	PCE	cis-1,2-DCE
MAFB-111	WT/B	5/9/12	1.4	<0.1
MAFB-112	WT/C	5/2/12	0.8	0.2J
MAFB-129	WT/C	6/14/11	<0.1	<0.1
MAFB-132	**WT/C**	**11/7/12**	**33**	**38**
MAFB-133	**WT/C**	**4/30/12**	**5.1**	2.1
MAFB-136	WT/C	5/9/12	2.2	2
MAFB-288	B	6/14/11	.09J	1.2J
MAFB-398	**WT/B**	**5/8/12**	**6.4**	0.7
MAFB-398C	**C**	**4/30/12**	3.7	**6.6**
MAFB-399	C	5/1/12	4.3	3
MAFB-400	C	5/4/12	5	3.5
MAFB-438	WT	5/20/11	3.8	1.1
MAFB-465	**WT/C**	**11/30/12**	**22**	**28**

Northeast Plume Area
PCE and cis-1,2-DCE
Isoconcentration Contours

Former Mather Air Force Base
Sacramento County, California

Figure 3-1

Map: L:\Projects\Mather\ArcMaps\Annuals\Groundwater_2012\ITR\Fig3-1_NEP.mxd AMN 06.04.2013 SAC
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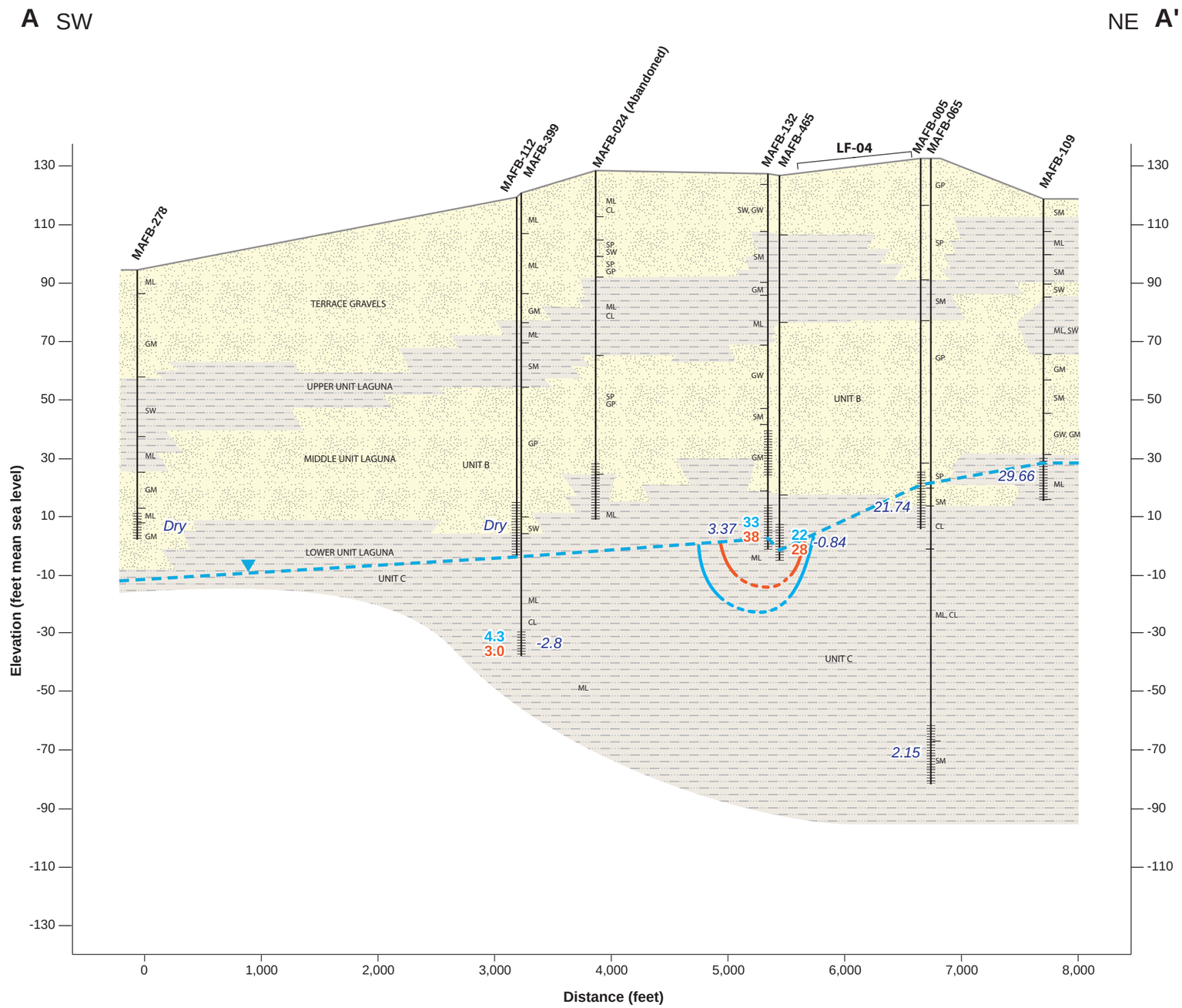


Legend

Relatively fine-grained sediments, silty sand, clayey sand, silt, clay (considered to be relatively low permeability)

Relatively coarse-grained sediments, sand, silty gravel, gravel (considered to be relatively high permeability)

29.66 Groundwater Elevation (4Q12) (ft msl)

Estimated Potentiometric Groundwater Surface (4Q12)

Well

Well Screen

Analytical Data Results (µg/L):

33 PCE
38 cis-1,2-DCE

(Analytical data results from 2011 and 2012 unless otherwise indicated.)

PCE Isoconcentration Contour (5.0 µg/L)

cis-1,2-DCE Isoconcentration Contour (6.0 µg/L)

0 1000

Horizontal Scale:
1″ = 1000'
Vertical Scale:
1″ = 40'

Notes:
- Modified from *Annual and Fourth Quarter 2008 Mather Groundwater Monitoring Report* (MWH, 2009a).
- Cross-section plan view shown on Figure 3-1.

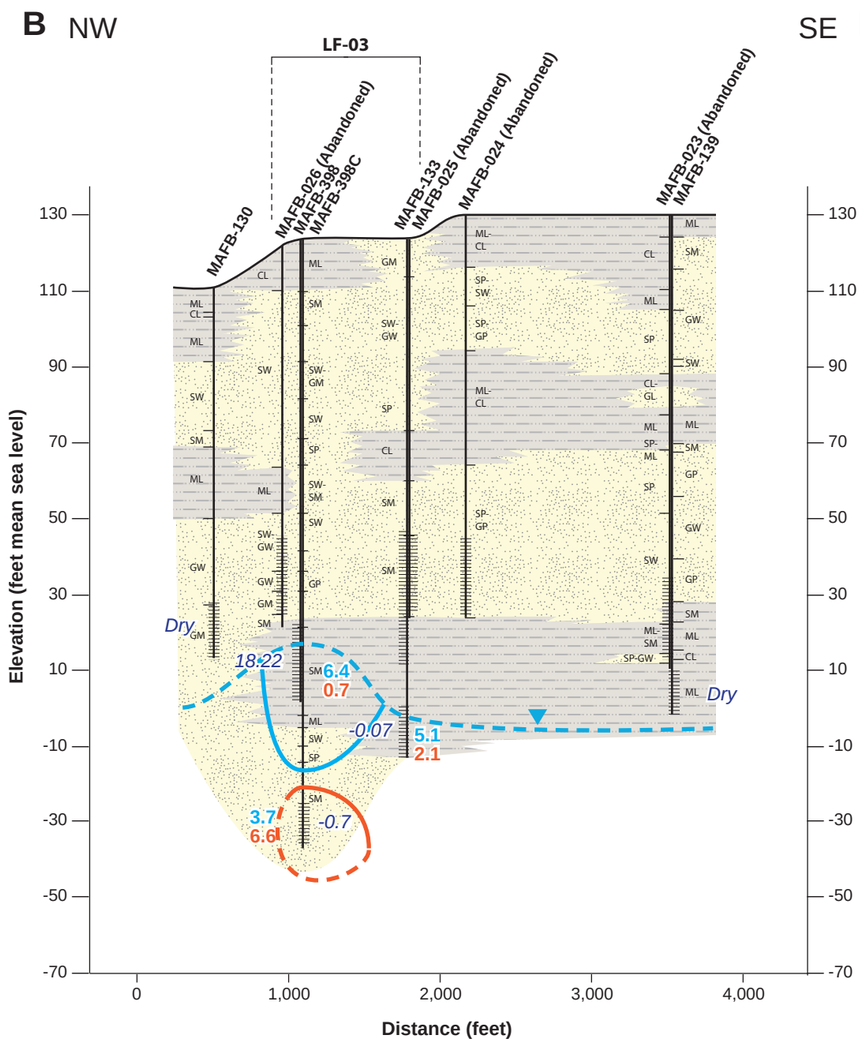
URS

Hydrogeologic Cross-Section A-A' Northeast Plume Area

Former Mather Air Force Base
Sacramento County, California

Figure 3-2

H:\Graphics\Mather\xsect\x-sect-AA-NE-Plume-Area.ai - LCT 04.25.13 SAC



Legend

Relatively fine-grained sediments, silty sand, clayey sand, silt, clay (considered to be relatively low permeability)

Relatively coarse-grained sediments, sand, silty gravel, gravel (considered to be relatively high permeability)

29.66 Groundwater Elevation (4Q12) (ft msl)

Estimated Potentiometric Groundwater Surface (4Q12)

Well

Well Screen

Analytical Data Results (µg/L):

33 PCE
38 cis-1,2-DCE

(Analytical data results from 2011 and 2012 unless otherwise indicated.)

PCE Isoconcentration Contour (5.0 µg/L)

cis-1,2-DCE Isoconcentration Contour (6.0 µg/L)

0 1000

Horizontal Scale:
1″ = 1000'
Vertical Scale:
1″ = 40'

Notes:
- Modified from *Annual and Fourth Quarter 2008 Mather Groundwater Monitoring Report* (MWH, 2009a).
- Cross-section plan view shown on Figure 3-1.

URS

Hydrogeologic Cross-Section B-B'
Northeast Plume Area

Former Mather Air Force Base
Sacramento County, California

Figure 3-3

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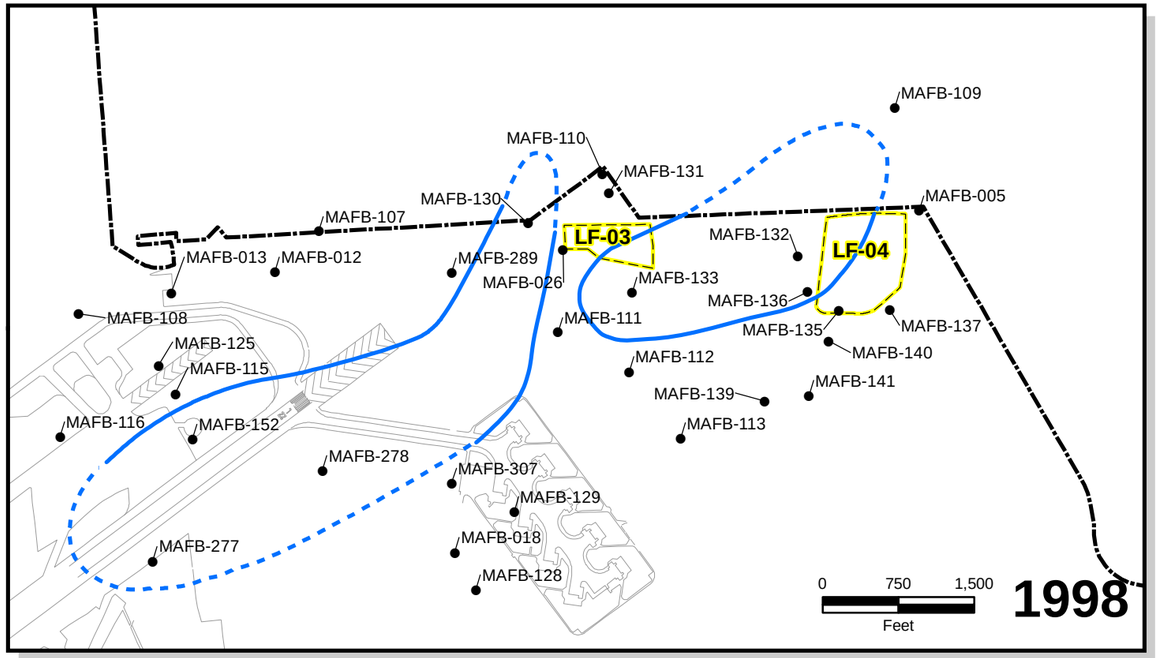
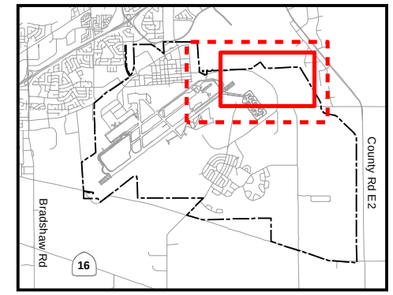
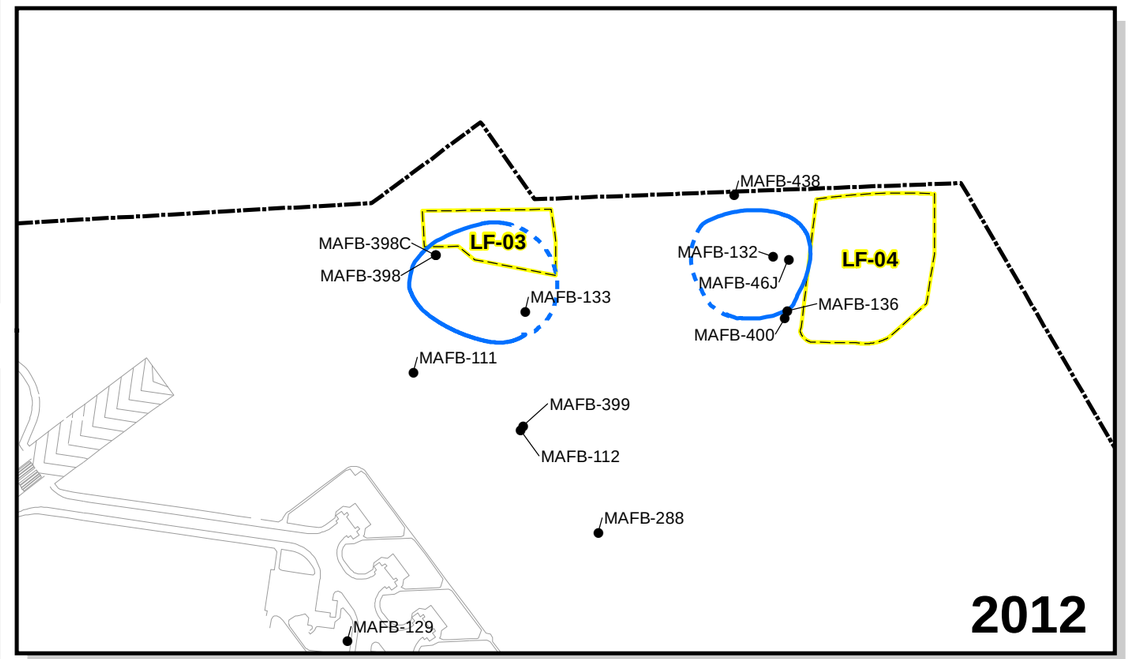
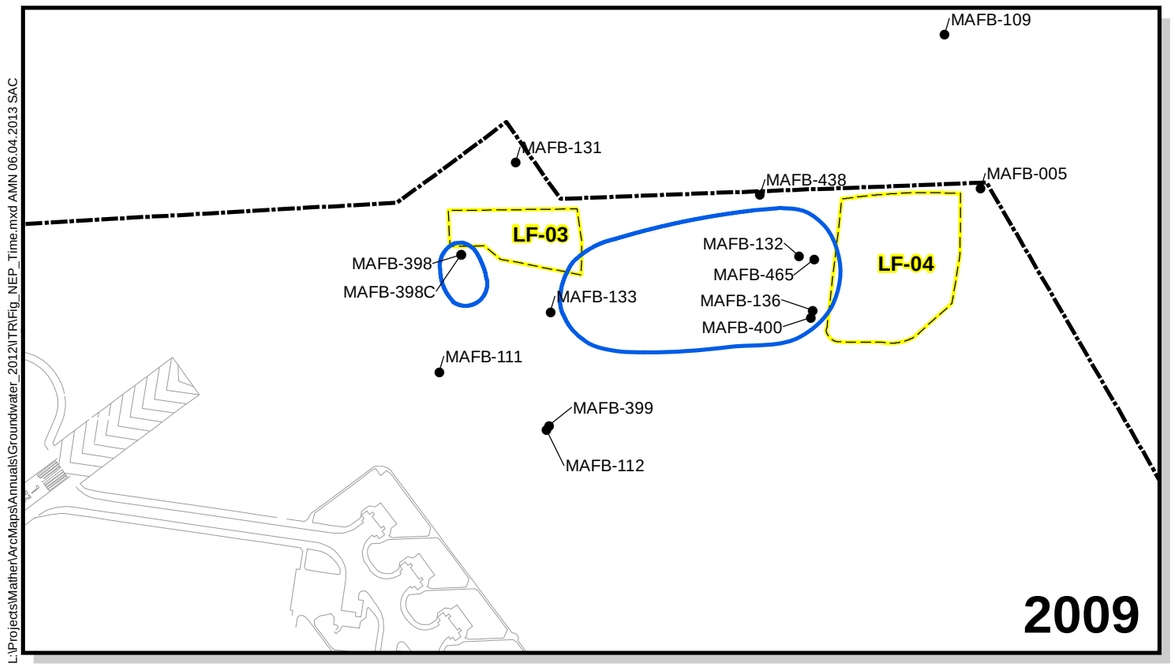




- Groundwater Monitoring Well
- Aquifer Cleanup Level (ACL) Composite Plume (PCE and cis-1, 2-DCE)
- IRP Site
- Mather Boundary





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N

0 500 1,000

Feet

1 inch = 1,000 feet

URS

Northeast Plume Area Historical Versus Current Composite ACL Plume

Former Mather Air Force Base
Sacramento County, California

Figure 3 - 4

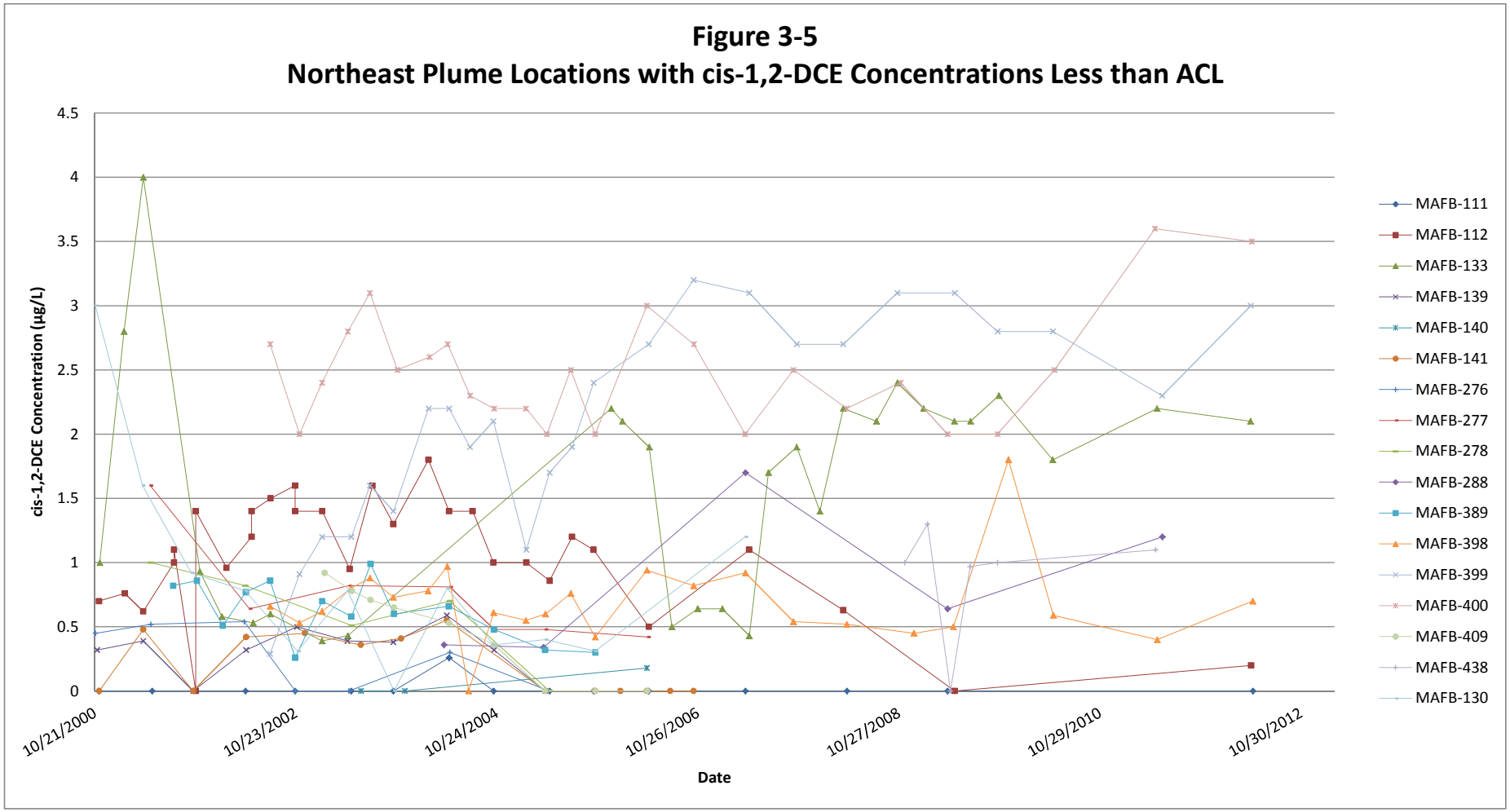


Figure 3-5
Northeast Plume Locations with cis-1,2-DCE Concentrations Less than ACL
cis-1,2-DCE Concentration (µg/L)
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
10/21/2000
10/23/2002
10/24/2004
10/26/2006
10/27/2008
10/29/2010
10/30/2012
Date
MAFB-111
MAFB-112
MAFB-133
MAFB-139
MAFB-140
MAFB-141
MAFB-276
MAFB-277
MAFB-278
MAFB-288
MAFB-389
MAFB-398
MAFB-399
MAFB-400
MAFB-409
MAFB-438
MAFB-130

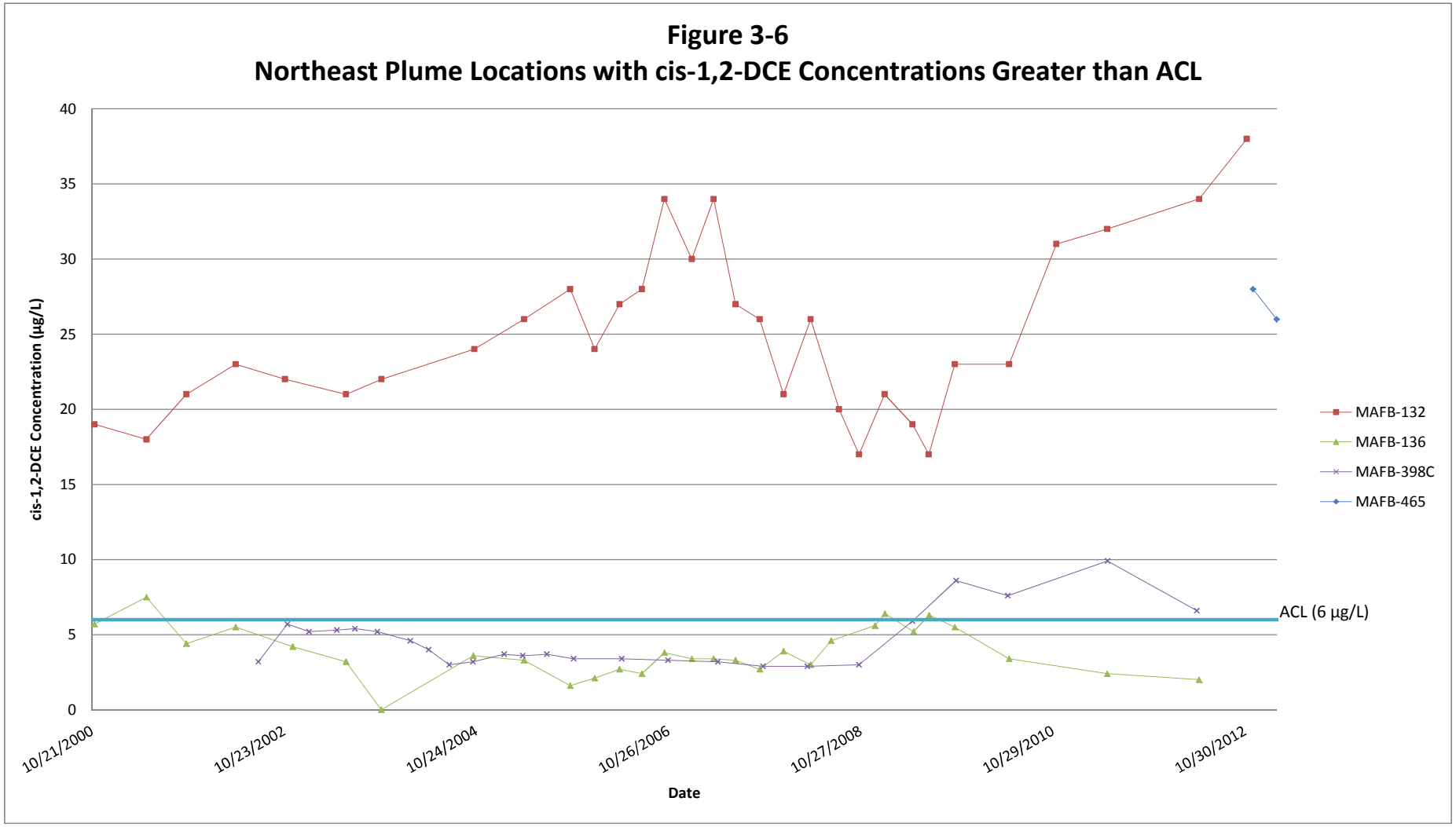


Figure 3-6
Northeast Plume Locations with cis-1,2-DCE Concentrations Greater than ACL
cis-1,2-DCE Concentration (µg/L)
40
35
30
25
20
15
10
5
0
10/21/2000
10/23/2002
10/24/2004
10/26/2006
10/27/2008
10/29/2010
10/30/2012
Date
MAFB-132
MAFB-136
MAFB-398C
MAFB-465
ACL (6 µg/L)

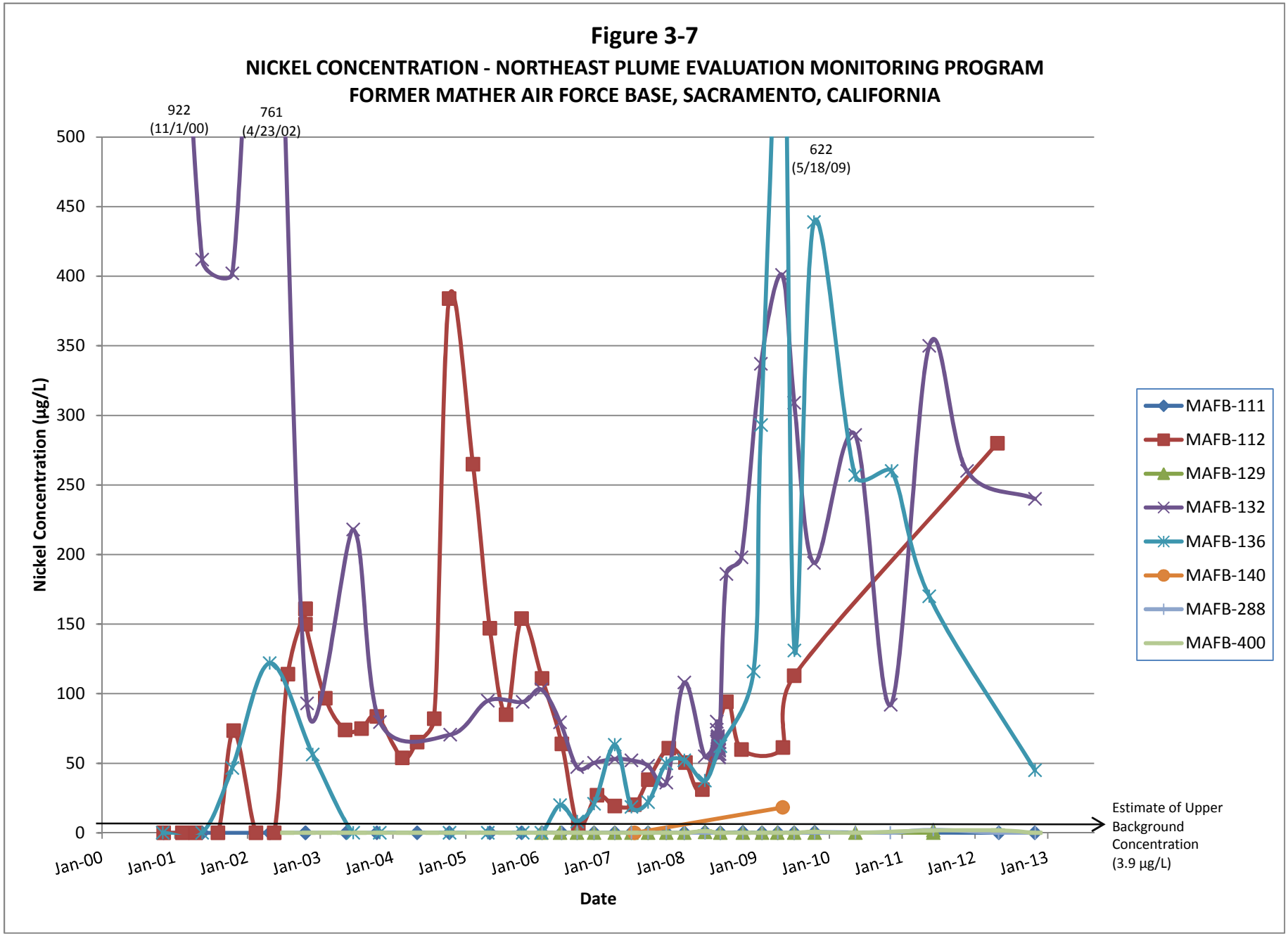


Figure 3-7
NICKEL CONCENTRATION - NORTHEAST PLUME EVALUATION MONITORING PROGRAM
FORMER MATHER AIR FORCE BASE, SACRAMENTO, CALIFORNIA
922
(11/1/00)
761
(4/23/02)
622
(5/18/09)
Nickel Concentration (µg/L)
500
450
400
350
300
250
200
150
100
50
0
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Date
Estimate of Upper Background Concentration (3.9 µg/L)
MAFB-111
MAFB-112
MAFB-129
MAFB-132
MAFB-136
MAFB-140
MAFB-288
MAFB-400

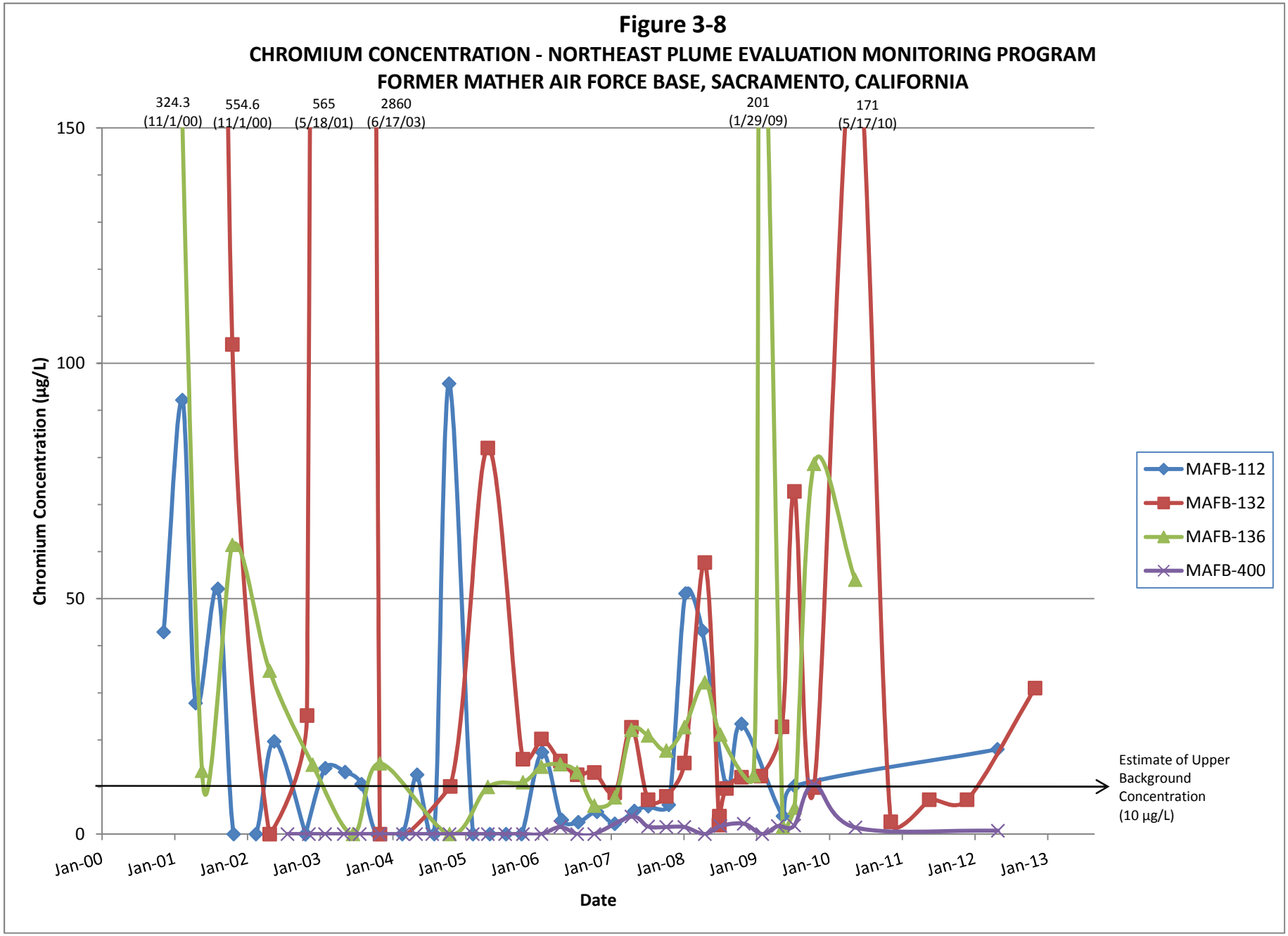
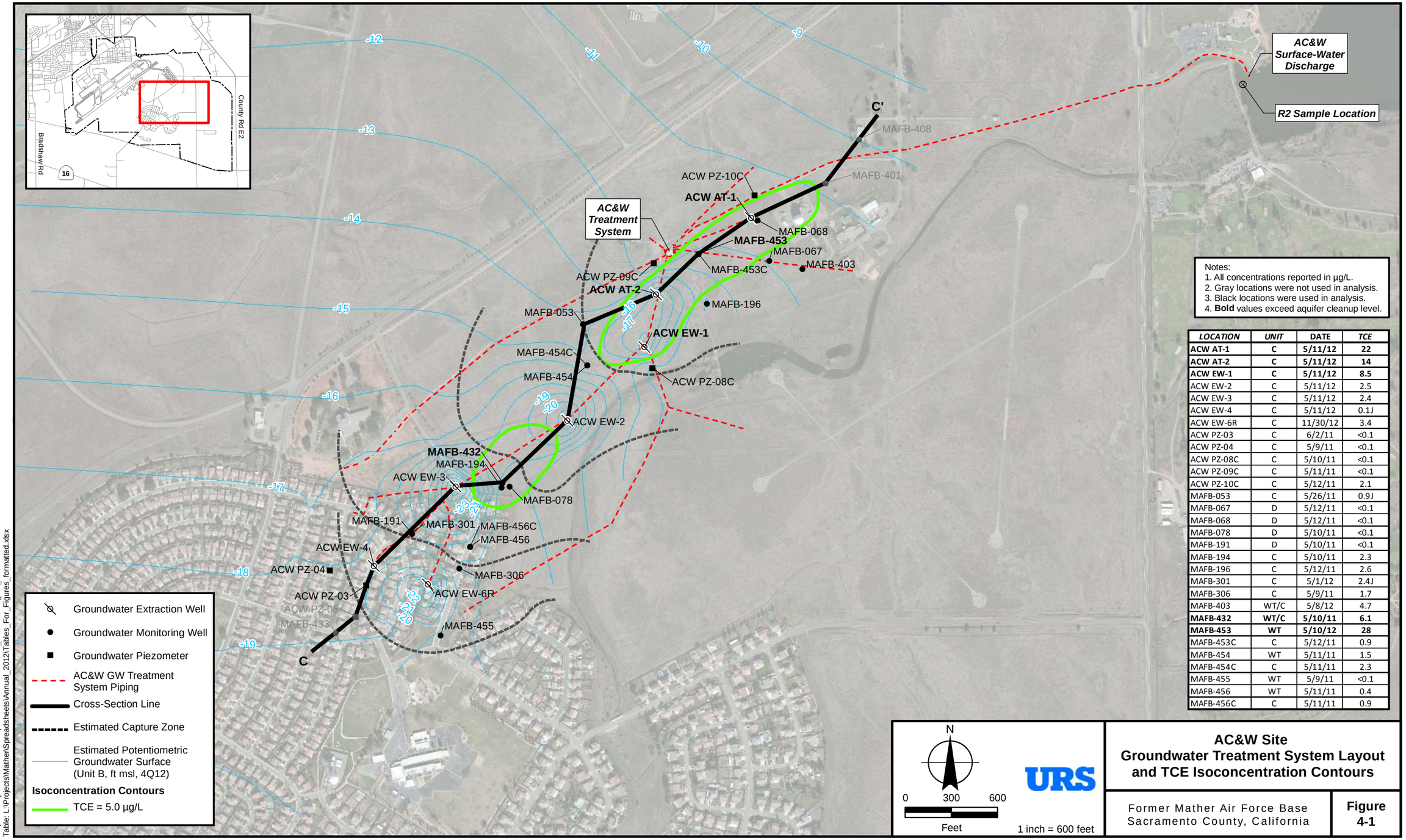


Figure 3-8
CHROMIUM CONCENTRATION - NORTHEAST PLUME EVALUATION MONITORING PROGRAM
FORMER MATHER AIR FORCE BASE, SACRAMENTO, CALIFORNIA
324.3 (11/1/00)
554.6 (11/1/00)
565 (5/18/01)
2860 (6/17/03)
201 (1/29/09)
171 (5/17/10)
150
100
50
0
Chromium Concentration (µg/L)
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Date
MAFB-112
MAFB-132
MAFB-136
MAFB-400
Estimate of Upper Background Concentration (10 µg/L)



Notes:
1. All concentrations reported in µg/L.
2. Gray locations were not used in analysis.
3. Black locations were used in analysis.
4. **Bold** values exceed aquifer cleanup level.

LOCATION	UNIT	DATE	TCE
ACW AT-1	**C**	**5/11/12**	**22**
ACW AT-2	**C**	**5/11/12**	**14**
ACW EW-1	**C**	**5/11/12**	**8.5**
ACW EW-2	C	5/11/12	2.5
ACW EW-3	C	5/11/12	2.4
ACW EW-4	C	5/11/12	0.1J
ACW EW-6R	C	11/30/12	3.4
ACW PZ-03	C	6/2/11	<0.1
ACW PZ-04	C	5/9/11	<0.1
ACW PZ-08C	C	5/10/11	<0.1
ACW PZ-09C	C	5/11/11	<0.1
ACW PZ-10C	C	5/12/11	2.1
MAFB-053	C	5/26/11	0.9J
MAFB-067	D	5/12/11	<0.1
MAFB-068	D	5/12/11	<0.1
MAFB-078	D	5/10/11	<0.1
MAFB-191	D	5/10/11	<0.1
MAFB-194	C	5/10/11	2.3
MAFB-196	C	5/12/11	2.6
MAFB-301	C	5/1/12	2.4J
MAFB-306	C	5/9/11	1.7
MAFB-403	WT/C	5/8/12	4.7
MAFB-432	**WT/C**	**5/10/11**	**6.1**
MAFB-453	**WT**	**5/10/12**	**28**
MAFB-453C	C	5/12/11	0.9
MAFB-454	WT	5/11/11	1.5
MAFB-454C	C	5/11/11	2.3
MAFB-455	WT	5/9/11	<0.1
MAFB-456	WT	5/11/11	0.4
MAFB-456C	C	5/11/11	0.9

AC&W Site
Groundwater Treatment System Layout and TCE Isoconcentration Contours

Former Mather Air Force Base
Sacramento County, California

Figure 4-1

Map: L:\Projects\Mather\ArcMaps\Annuals\Groundwater_2012\ITR\Fig4-1_ACW.mxd AMN 06.04.2013 SAC
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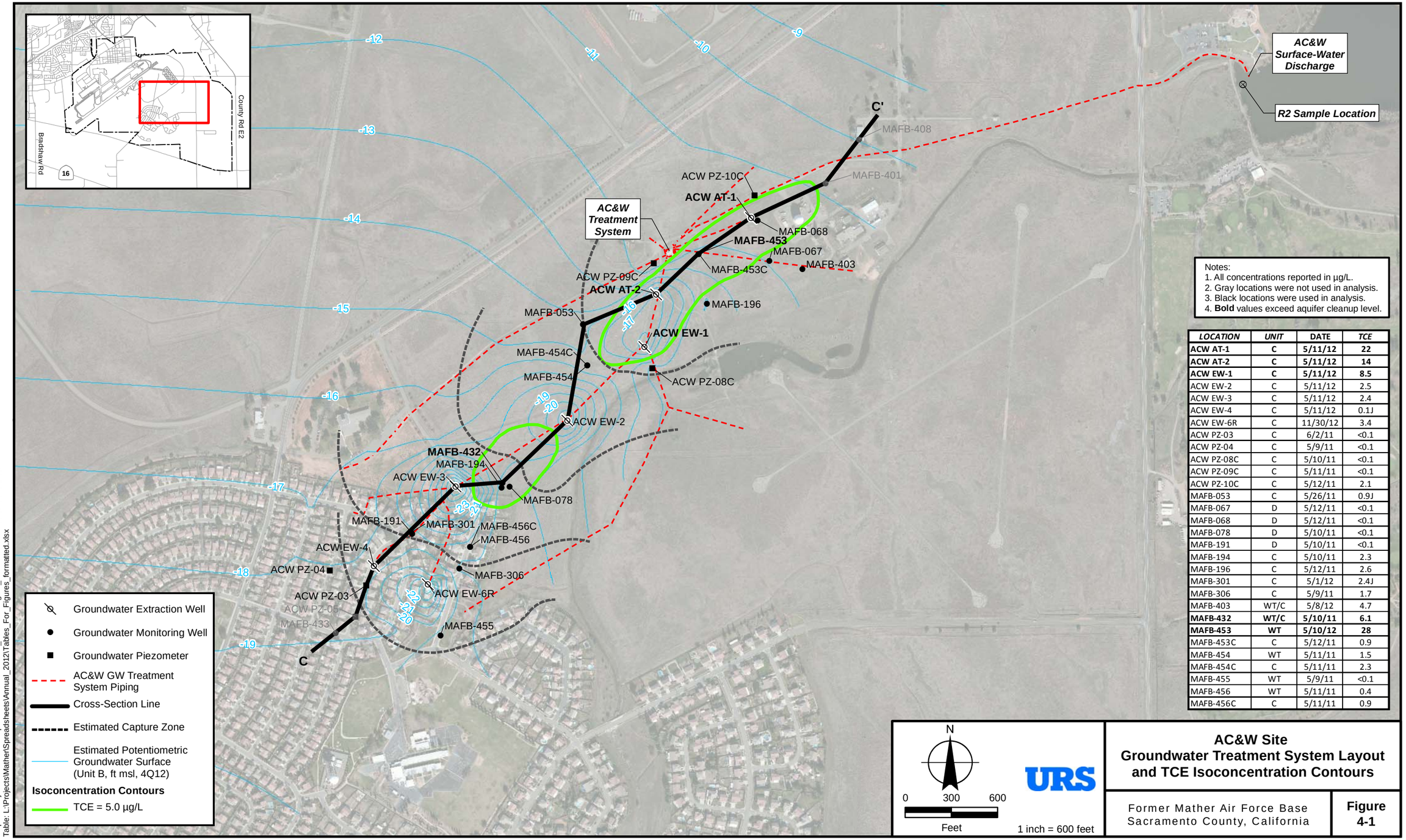


Notes:
1. All concentrations reported in µg/L.
2. Gray locations were not used in analysis.
3. Black locations were used in analysis.
4. **Bold** values exceed aquifer cleanup level.

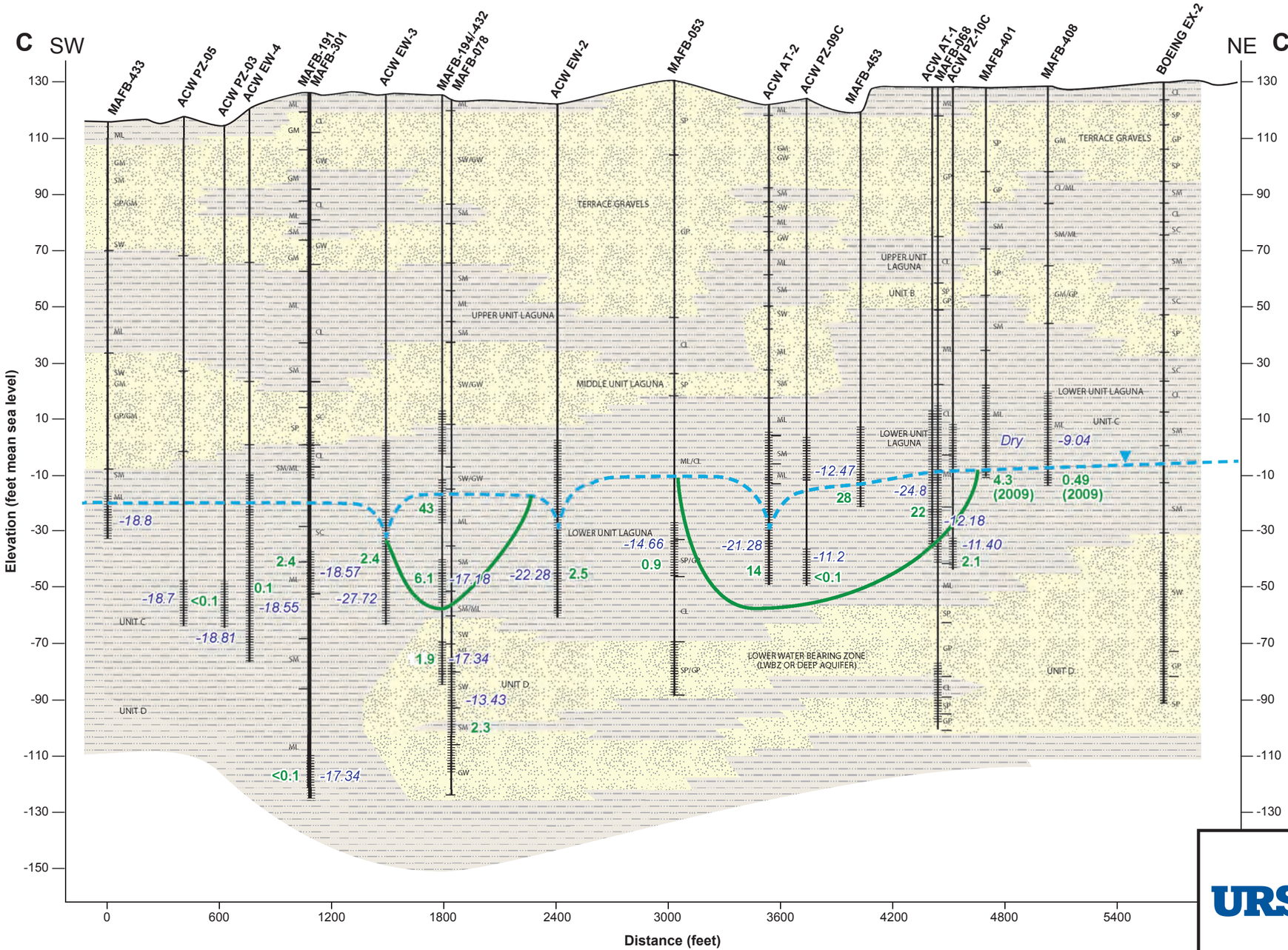
LOCATION	UNIT	DATE	TCE
ACW AT-1	**C**	**5/11/12**	**22**
ACW AT-2	**C**	**5/11/12**	**14**
ACW EW-1	**C**	**5/11/12**	**8.5**
ACW EW-2	C	5/11/12	2.5
ACW EW-3	C	5/11/12	2.4
ACW EW-4	C	5/11/12	0.1J
ACW EW-6R	C	11/30/12	3.4
ACW PZ-03	C	6/2/11	<0.1
ACW PZ-04	C	5/9/11	<0.1
ACW PZ-08C	C	5/10/11	<0.1
ACW PZ-09C	C	5/11/11	<0.1
ACW PZ-10C	C	5/12/11	2.1
MAFB-053	C	5/26/11	0.9J
MAFB-067	D	5/12/11	<0.1
MAFB-068	D	5/12/11	<0.1
MAFB-078	D	5/10/11	<0.1
MAFB-191	D	5/10/11	<0.1
MAFB-194	C	5/10/11	2.3
MAFB-196	C	5/12/11	2.6
MAFB-301	C	5/1/12	2.4J
MAFB-306	C	5/9/11	1.7
MAFB-403	WT/C	5/8/12	4.7
MAFB-432	**WT/C**	**5/10/11**	**6.1**
MAFB-453	**WT**	**5/10/12**	**28**
MAFB-453C	C	5/12/11	0.9
MAFB-454	WT	5/11/11	1.5
MAFB-454C	C	5/11/11	2.3
MAFB-455	WT	5/9/11	<0.1
MAFB-456	WT	5/11/11	0.4
MAFB-456C	C	5/11/11	0.9

AC&W Site
Groundwater Treatment System Layout and TCE Isoconcentration Contours

Former Mather Air Force Base
Sacramento County, California

Figure 4-1

Map: L:\Projects\Mather\ArcMaps\Annuals\Groundwater_2012\ITR\Fig4-1_ACW.mxd AMN 06.04.2013 SAC
Table: L:\Projects\Mather\Spreadsheets\Annual_2012\Tables_For_Figures_formatted.xlsx



Legend

- Relatively fine-grained sediments, silty sand, clayey sand, silt, clay (considered to be relatively low permeability)
- Relatively coarse-grained sediments, sand, silty gravel, gravel (considered to be relatively high permeability)
- *29.66* Groundwater Elevation (4Q12) (ft msl)
- Estimated Potentiometric Water-table Surface (4Q12)
- Well
- Well Screen

Analytical Data Results (µg/L):

- **22** TCE

(Analytical data results from 2011 and 2012 unless otherwise indicated.)

- TCE Isoconcentration Contour (5.0 µg/L)

0 600

Horizontal Scale:
1″ = 600'
Vertical Scale:
1″ = 40'

Notes:

- Modified from *Annual and Fourth Quarter 2008 Mather Groundwater Monitoring Report* (MWH, 2009a).
- Cross-section plan view shown on Figure 4-1.

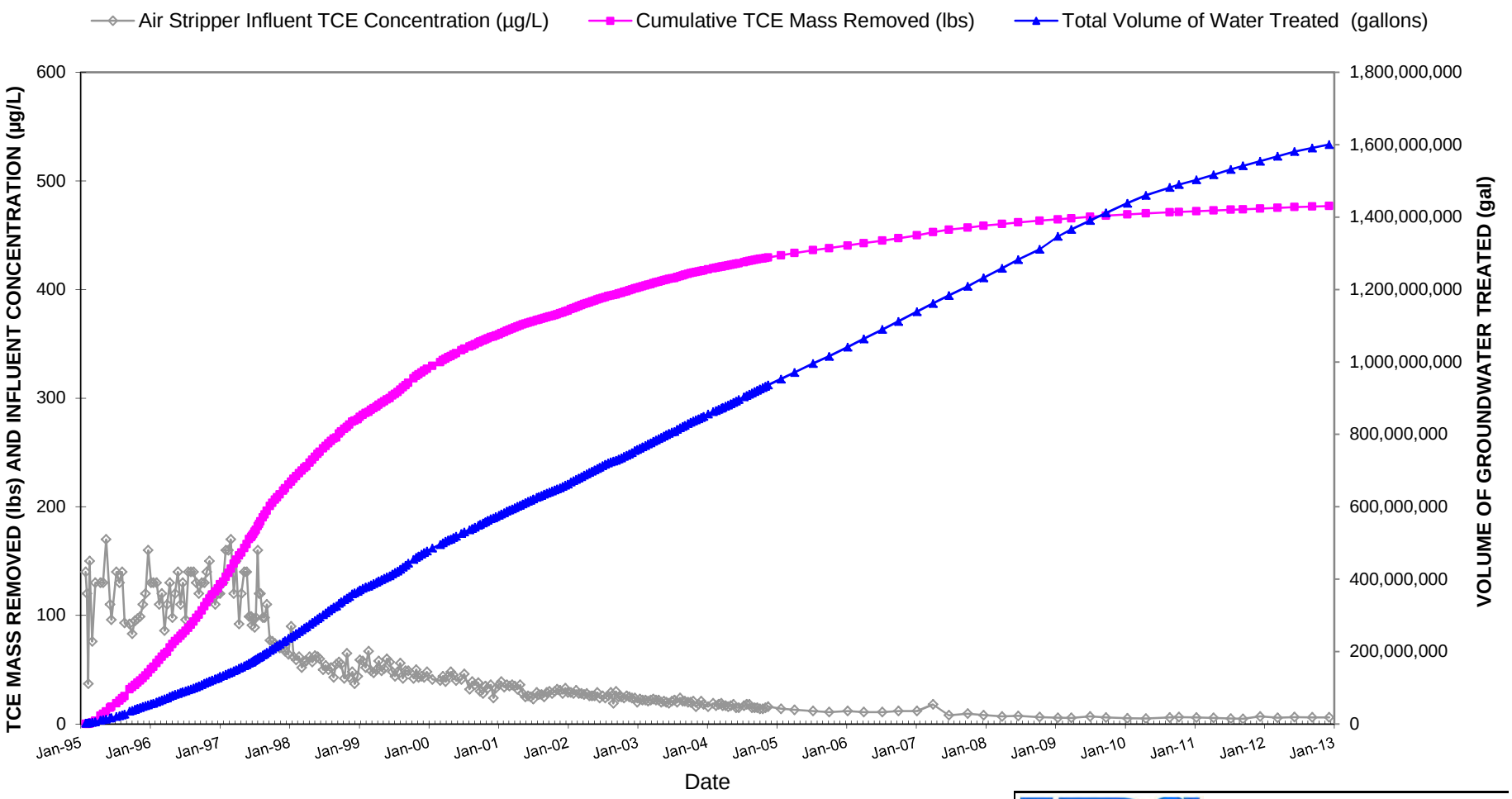
URS

Hydrogeologic Cross-Section C-C'
AC&W Site

Former Mather Air Force Base
Sacramento County, California

Figure 4-2

H:\Graphics\Mather\xsect\x-sect-CC-ACnW.ai - LCT 04.16.13 SAC

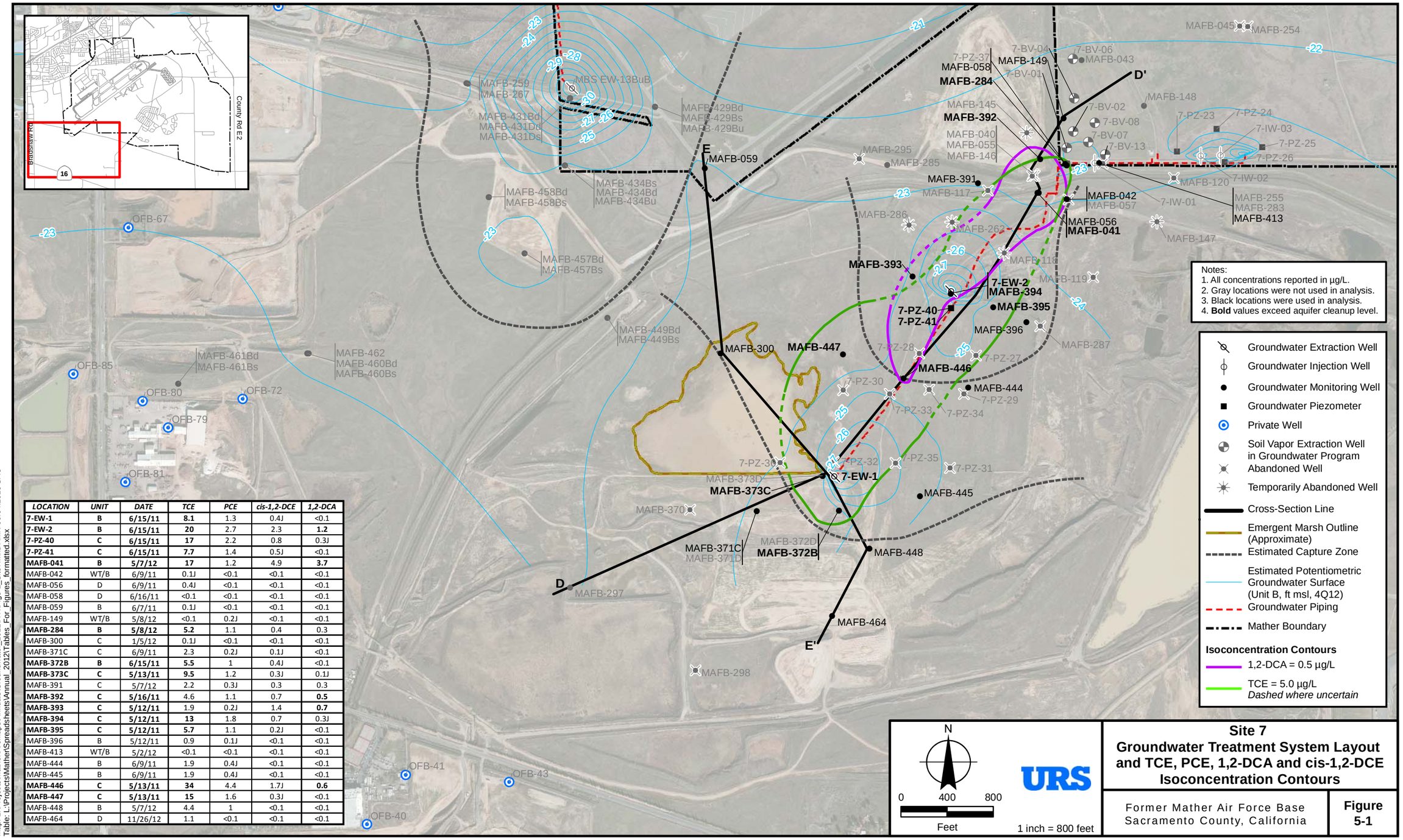


Annual and Fourth Quarter 2012
Mather Groundwater Monitoring Report

URS

MATHER AIR FORCE BASE
SACRAMENTO COUNTY, CALIFORNIA

AC&W
TREATMENT SYSTEM CUMULATIVE TCE MASS REMOVED, INFLUENT CONCENTRATION AND VOLUME OF GROUNDWATER TREATED
FIGURE 4-3



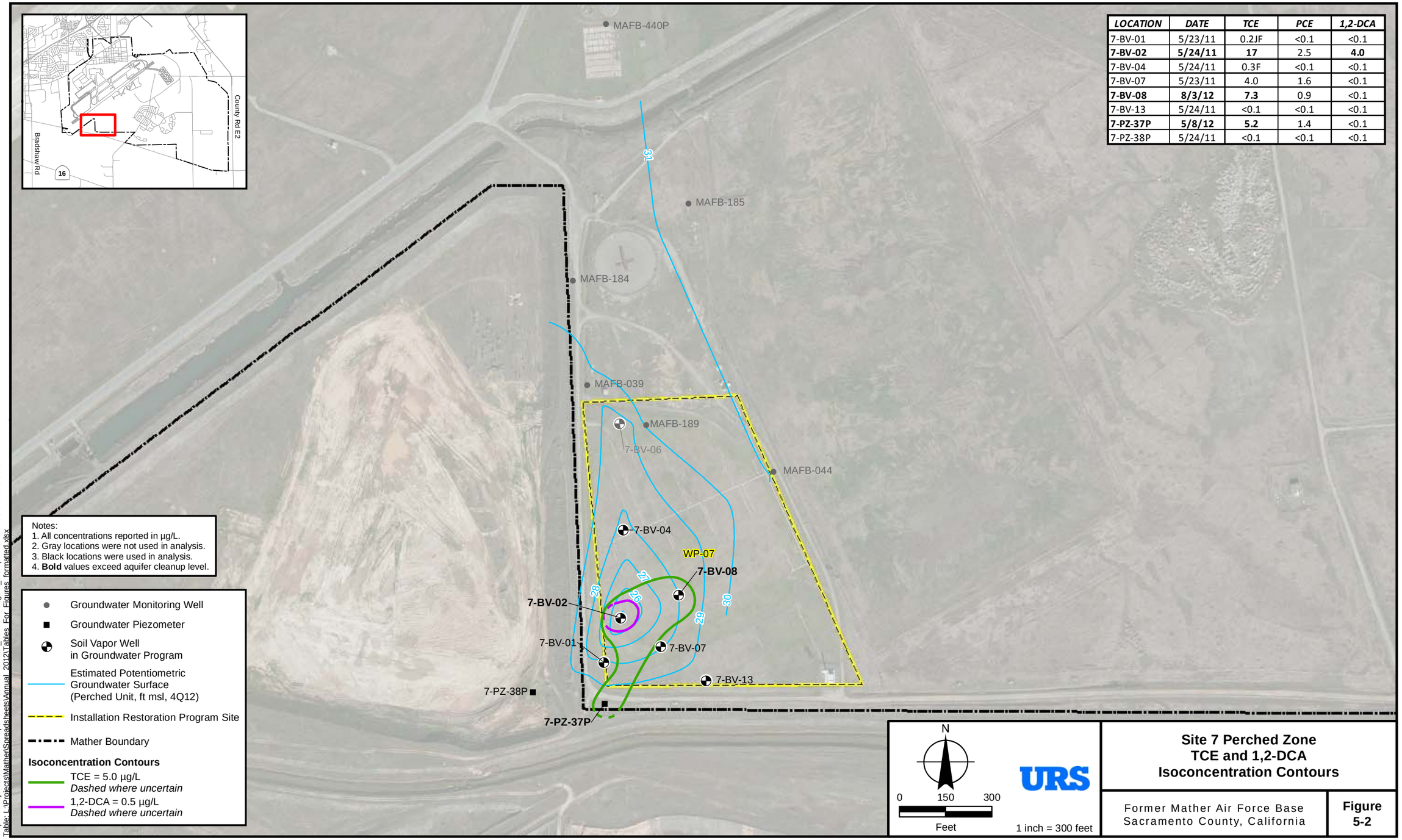
LOCATION	UNIT	DATE	TCE	PCE	cis-1,2-DCE	1,2-DCA
7-EW-1	**B**	**6/15/11**	**8.1**	1.3	0.4J	<0.1
7-EW-2	**B**	**6/15/11**	**20**	2.7	2.3	**1.2**
7-PZ-40	**C**	**6/15/11**	**17**	2.2	0.8	0.3J
7-PZ-41	**C**	**6/15/11**	**7.7**	1.4	0.5J	<0.1
MAFB-041	**B**	**5/7/12**	**17**	1.2	4.9	**3.7**
MAFB-042	WT/B	6/9/11	0.1J	<0.1	<0.1	<0.1
MAFB-056	D	6/9/11	0.4J	<0.1	<0.1	<0.1
MAFB-058	D	6/16/11	<0.1	<0.1	<0.1	<0.1
MAFB-059	B	6/7/11	0.1J	<0.1	<0.1	<0.1
MAFB-149	WT/B	5/8/12	<0.1	0.2J	<0.1	<0.1
MAFB-284	**B**	**5/8/12**	**5.2**	1.1	0.4	0.3
MAFB-300	C	1/5/12	0.1J	<0.1	<0.1	<0.1
MAFB-371C	C	6/9/11	2.3	0.2J	0.1J	<0.1
MAFB-372B	**B**	**6/15/11**	**5.5**	1	0.4J	<0.1
MAFB-373C	**C**	**5/13/11**	**9.5**	1.2	0.3J	0.1J
MAFB-391	C	5/7/12	2.2	0.3J	0.3	0.3
MAFB-392	**C**	**5/16/11**	4.6	1.1	0.7	**0.5**
MAFB-393	**C**	**5/12/11**	1.9	0.2J	1.4	**0.7**
MAFB-394	**C**	**5/12/11**	**13**	1.8	0.7	0.3J
MAFB-395	**C**	**5/12/11**	**5.7**	1.1	0.2J	<0.1
MAFB-396	B	5/12/11	0.9	0.1J	<0.1	<0.1
MAFB-413	WT/B	5/2/12	<0.1	<0.1	<0.1	<0.1
MAFB-444	B	6/9/11	1.9	0.4J	<0.1	<0.1
MAFB-445	B	6/9/11	1.9	0.4J	<0.1	<0.1
MAFB-446	**C**	**5/13/11**	**34**	4.4	1.7J	**0.6**
MAFB-447	**C**	**5/13/11**	**15**	1.6	0.3J	<0.1
MAFB-448	B	5/7/12	4.4	1	<0.1	<0.1
MAFB-464	D	11/26/12	1.1	<0.1	<0.1	<0.1

Site 7
Groundwater Treatment System Layout and TCE, PCE, 1,2-DCA and cis-1,2-DCE Isoconcentration Contours

Former Mather Air Force Base
Sacramento County, California

Figure 5-1

Map: L:\Projects\Mather\ArcMaps\Annuals\Groundwater_2012\TRFig5-1_Site7.mxd AMN 06.04.2013 SAC
Table: L:\Projects\Mather\Spreadsheets\Annual_2012\Tables_For_Figures_formatted.xlsx



LOCATION	DATE	TCE	PCE	1,2-DCA
7-BV-01	5/23/11	0.2JF	<0.1	<0.1
7-BV-02	**5/24/11**	**17**	2.5	**4.0**
7-BV-04	5/24/11	0.3F	<0.1	<0.1
7-BV-07	5/23/11	4.0	1.6	<0.1
7-BV-08	**8/3/12**	**7.3**	0.9	<0.1
7-BV-13	5/24/11	<0.1	<0.1	<0.1
7-PZ-37P	**5/8/12**	**5.2**	1.4	<0.1
7-PZ-38P	5/24/11	<0.1	<0.1	<0.1

Notes:
1. All concentrations reported in µg/L.
2. Gray locations were not used in analysis.
3. Black locations were used in analysis.
4. **Bold** values exceed aquifer cleanup level.

Groundwater Monitoring Well
Groundwater Piezometer
Soil Vapor Well in Groundwater Program
Estimated Potentiometric Groundwater Surface (Perched Unit, ft msl, 4Q12)
Installation Restoration Program Site
Mather Boundary

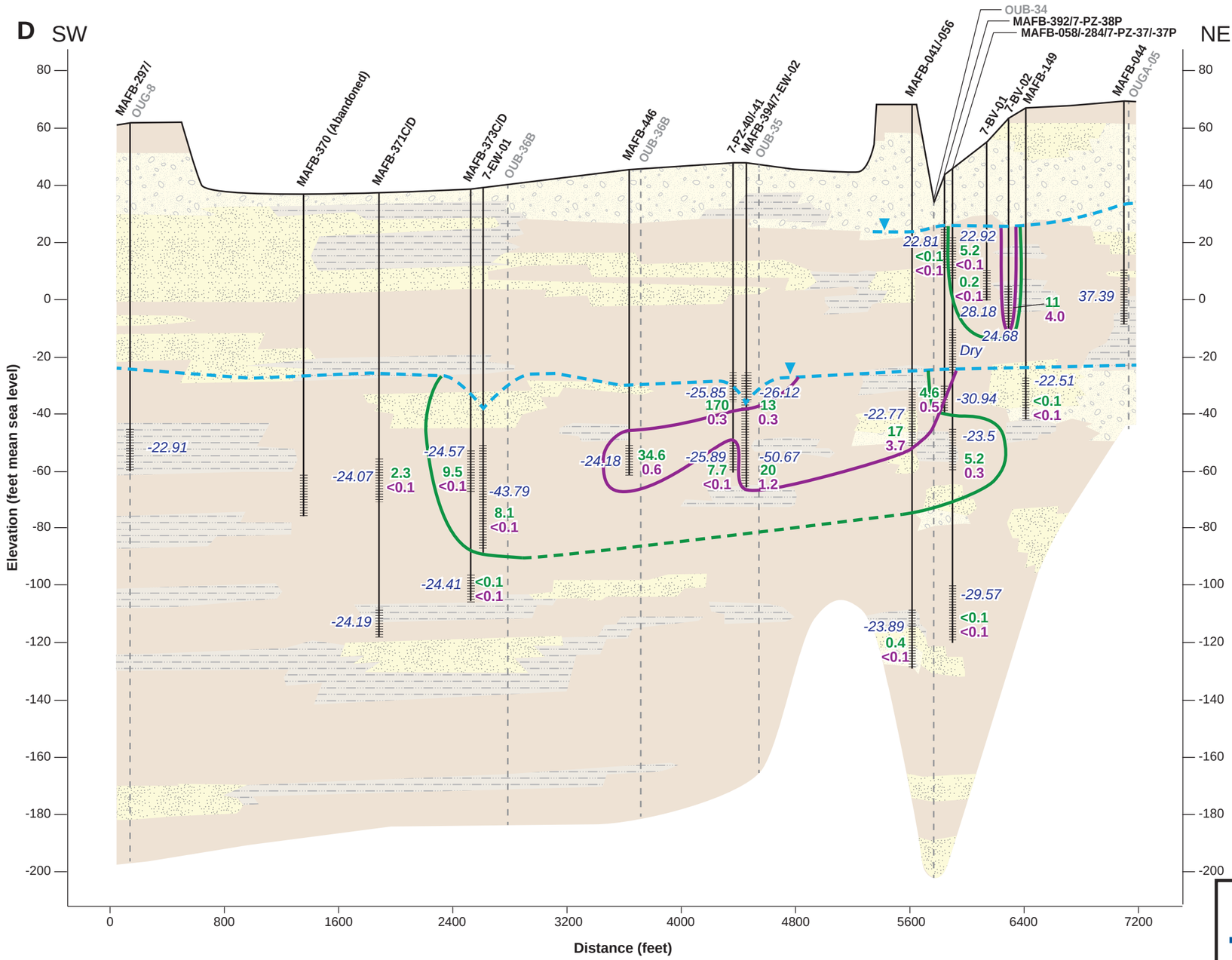
Isoconcentration Contours
TCE = 5.0 µg/L
Dashed where uncertain
1,2-DCA = 0.5 µg/L
Dashed where uncertain

Site 7 Perched Zone
TCE and 1,2-DCA
Isoconcentration Contours

Former Mather Air Force Base
Sacramento County, California

Figure 5-2

Map: L:\Projects\Mather\ArcMaps\Annuals\Groundwater_2012\TTR\Fig5-2_Site7p.mxd AMN 06.04.2013 SAC
Table: L:\Projects\Mather\Spreadsheets\Annual_2012\Tables_For_Figures_formatted.xlsx



Legend

- Gravel
- Sand
- Silty-Sand
- Silt

29.66 Groundwater Elevation (4Q12) (ft msl)

Estimated Potentiometric Groundwater Surface (4Q12)(Perched and B/C Units)

Well

Well Screen

OUB-35 IT Corp Soil Boring

Analytical Data Results (µg/L):

33 TCE
38 1,2-DCA

(Analytical data results from 2011 and 2012 unless otherwise indicated.)

TCE Isoconcentration Contour (5.0 µg/L)

1,2-DCA Isoconcentration Contour (0.5 µg/L)

0 800

Horizontal Scale:
1″ = 800'
Vertical Scale:
1″ = 40'

Notes:

- Modified from *Annual and Fourth Quarter 2008 Mather Groundwater Monitoring Report* (MWH, 2009a).
- Cross-section plan view shown on Figure 5-1.

URS

Hydrogeologic Cross-Section D-D'
Site 7

Former Mather Air Force Base
Sacramento County, California

Figure 5-3

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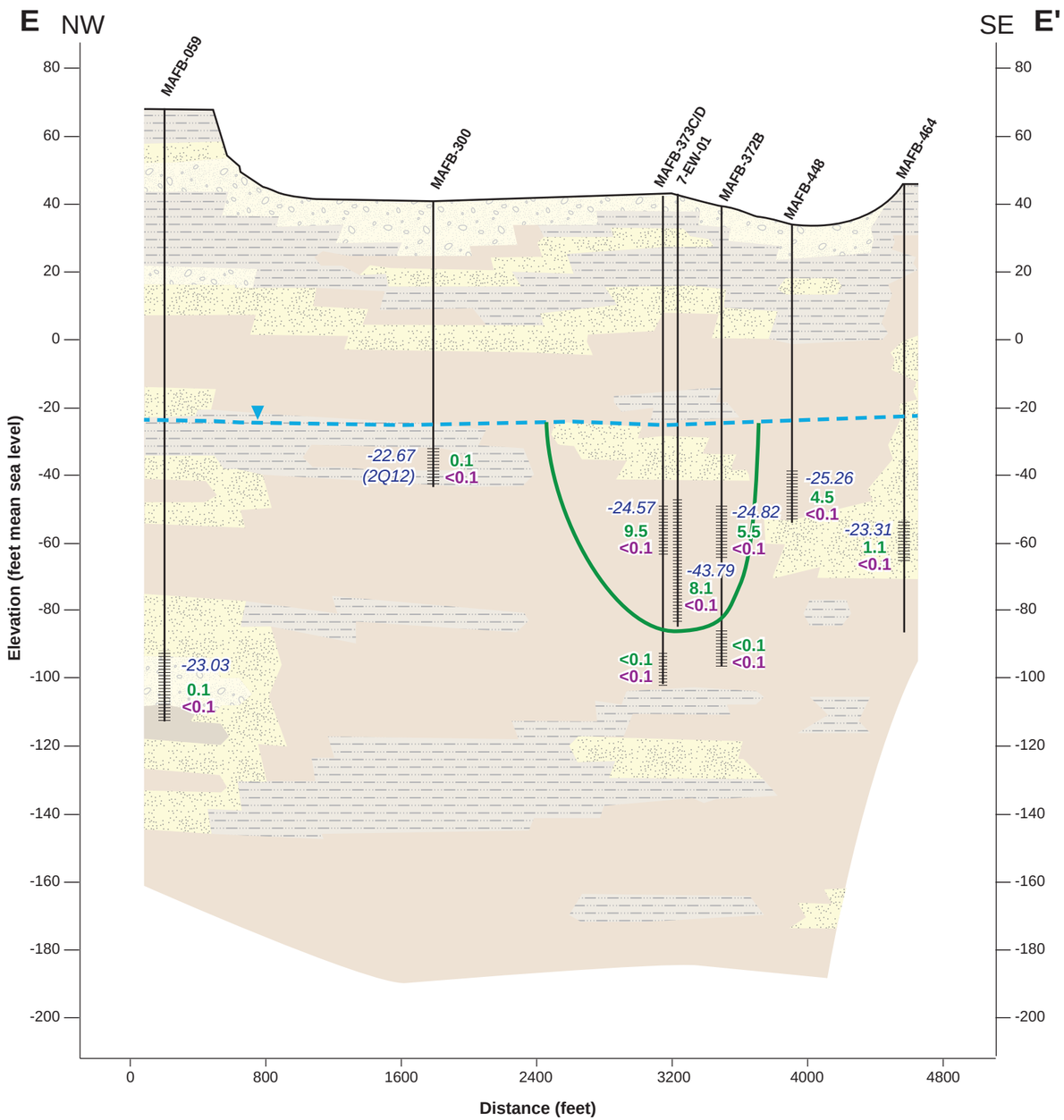


Legend

- Gravel
- Sand
- Silty-Sand
- Silt
- Clay

29.66 Groundwater Elevation (4Q12) (ft msl)

Estimated Potentiometric Groundwater Surface (4Q12)(Perched and B/C Units)

Well

Well Screen

Analytical Data Results (µg/L):

33 TCE
38 1,2-DCA

(Analytical data results from 2011 and 2012 unless otherwise indicated.)

TCE Isoconcentration Contour (5.0 µg/L)

1,2-DCA Isoconcentration Contour (0.5 µg/L)

0 800

Horizontal Scale:
1″ = 800'
Vertical Scale:
1″ = 40'

Notes:
- Modified from *Annual and Fourth Quarter 2008 Mather Groundwater Monitoring Report* (MWH, 2009a).
- Cross-section plan view shown on Figure 5-1.

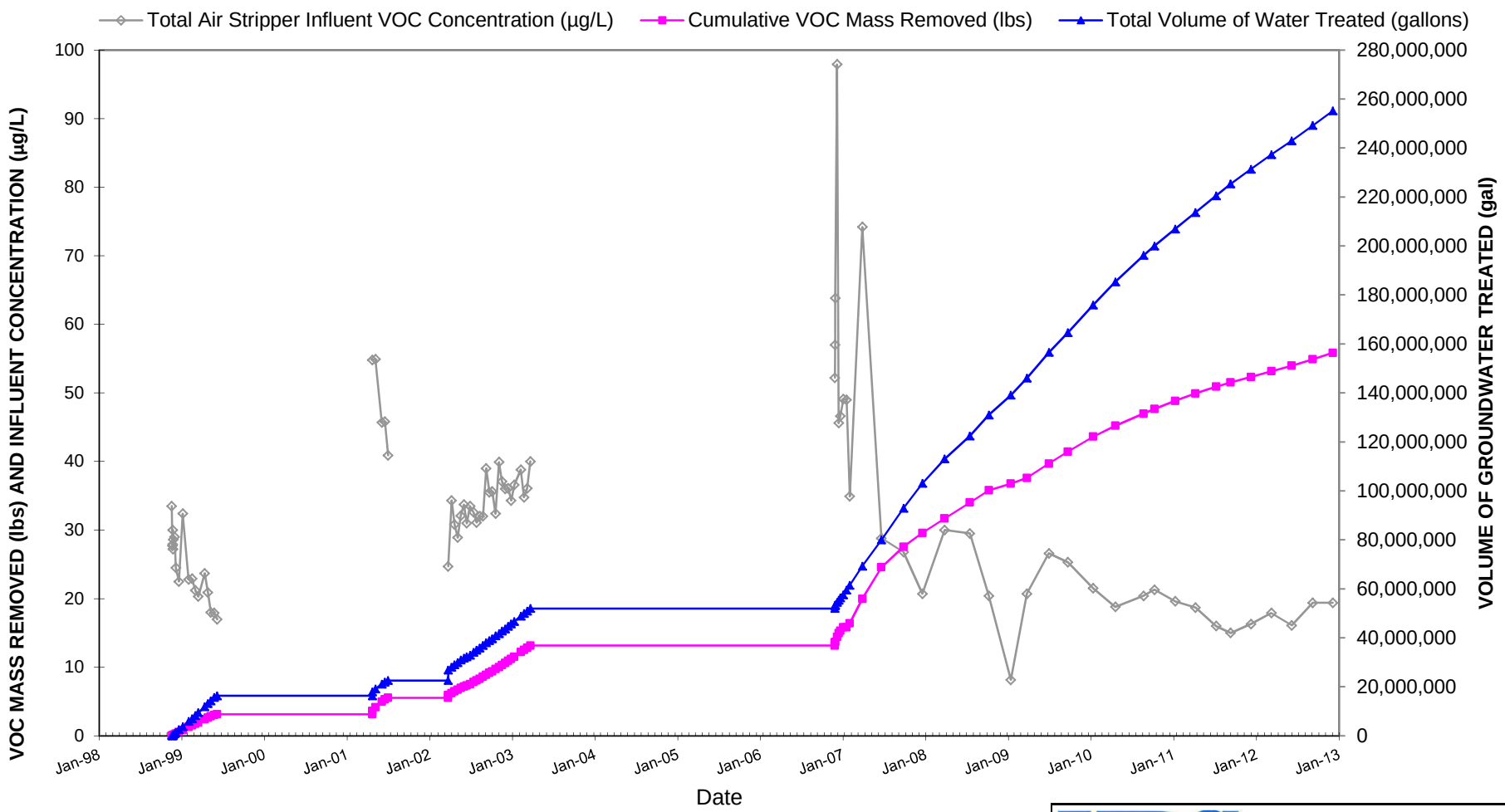
URS

Hydrogeologic Cross-Section E-E'
Site 7

Former Mather Air Force Base
Sacramento County, California

Figure 5-4

H:\Graphics\Mather\xsect\x-sect-EE-site7.ai - LCT 04.10.13 SAC



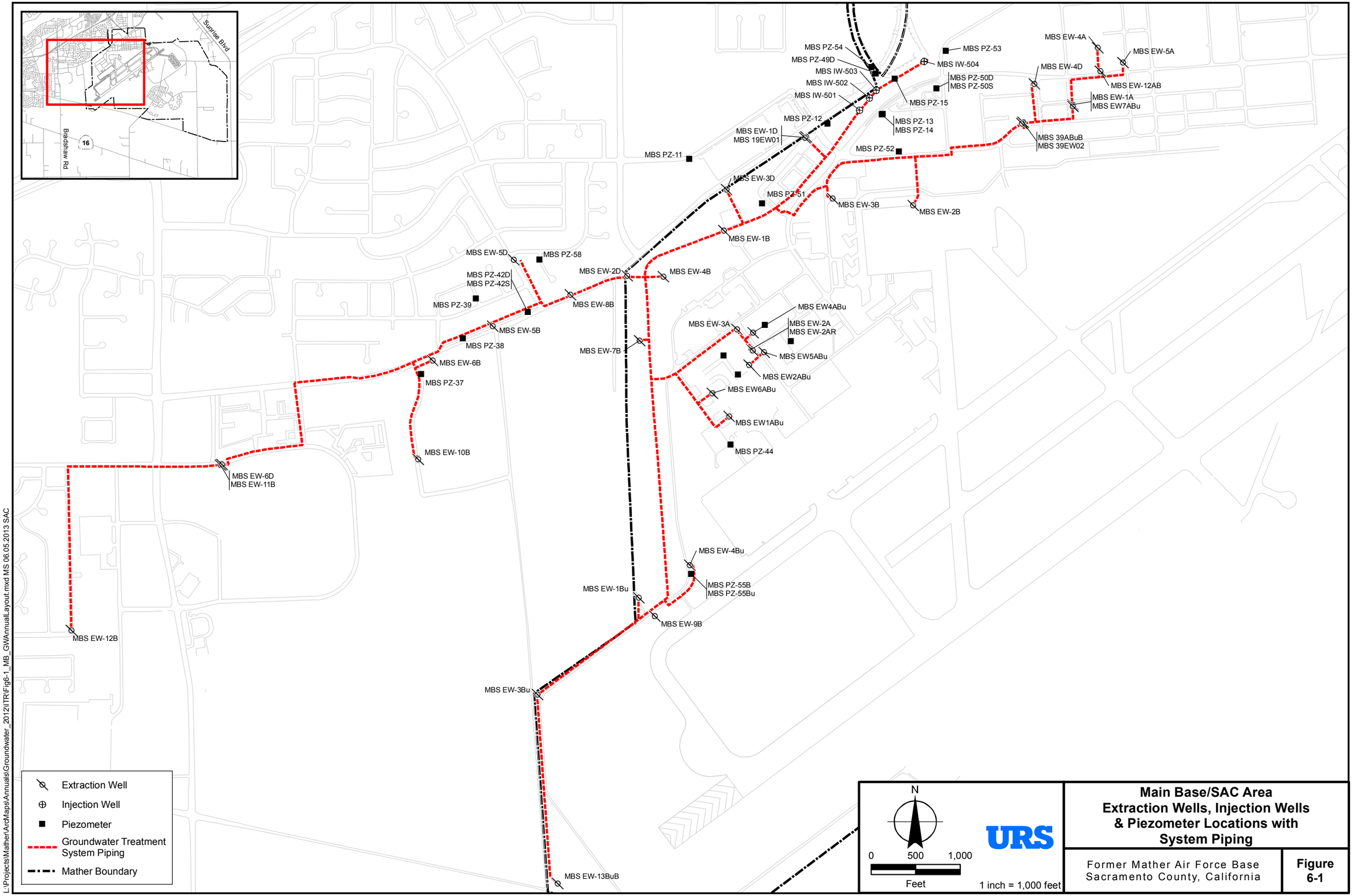
Annual and Fourth Quarter 2012
Mather Groundwater Monitoring Report

URS

MATHER AIR FORCE BASE
SACRAMENTO COUNTY, CALIFORNIA

SITE 7 TREATMENT SYSTEM CUMULATIVE VOLATILE ORGANIC COC MASS REMOVED, INFLUENT CONCENTRATION AND VOLUME OF GROUNDWATER TREATED

FIGURE 5-5



Main Base/SAC Area Extraction Wells, Injection Wells & Piezometer Locations with System Piping

Former Mather Air Force Base
Sacramento County, California

Figure 6-1

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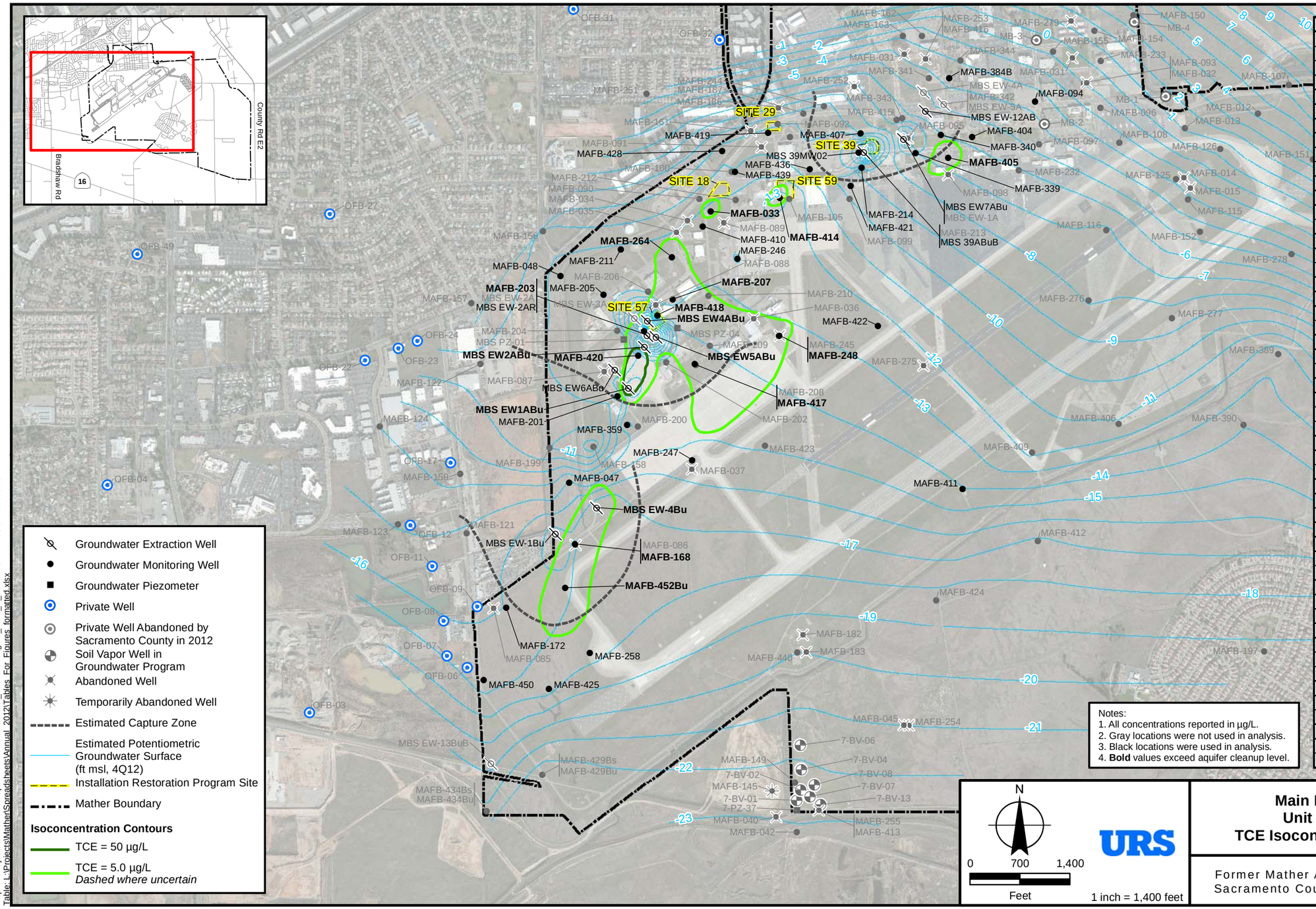


LOCATION	DATE	TCE
MAFB-033	**6/3/11**	**7.9**
MAFB-047	6/10/11	0.1J
MAFB-048	6/10/11	0.1J
MAFB-094	5/11/11	1.8
MAFB-168	**6/20/11**	**6.4**
MAFB-172	6/17/11	0.4J
MAFB-201	5/31/11	0.3J
MAFB-203	**5/31/11**	**16**
MAFB-205	6/1/11	0.6
MAFB-207	**5/31/11**	**23**
MAFB-211	6/9/11	1.8
MAFB-214	3/6/12	0.1J
MAFB-246	6/7/11	0.2J
MAFB-247	5/18/11	4.3
MAFB-248	**5/20/11**	**7.9**
MAFB-258	6/17/11	1.1
MAFB-264	**6/2/11**	**16**
MAFB-339	6/7/11	2.4
MAFB-340	6/7/11	0.3J
MAFB-359	5/27/11	1.4
MAFB-384B	5/27/11	0.3J
MAFB-404	5/13/11	1.1
MAFB-405	**5/13/11**	**22**
MAFB-407	3/5/12	<0.1
MAFB-410	6/3/11	<0.1
MAFB-411	5/19/11	0.3J
MAFB-414	**6/17/11**	**6.6**
MAFB-417	**6/1/11**	**13**
MAFB-418	**6/1/11**	**34**
MAFB-419	11/8/12	<0.1
MAFB-420	**5/19/11**	**78**
MAFB-421	3/5/12	0.3J
MAFB-422	5/18/11	0.7
MAFB-425	6/7/11	3
MAFB-428	6/20/11	<0.1
MAFB-436	5/4/12	0.4J
MAFB-439	6/17/11	<0.1
MAFB-450	6/7/11	<0.1
MAFB-452Bu	**5/18/11**	**11**
MBS 39ABuB	3/5/12	<0.1
MBS 39MW02	3/6/12	0.5J
MBS EW-12AB	5/11/12	<0.1
MBS EW1ABu	**5/25/11**	**52**
MBS EW-1Bu	5/24/11	1.5
MBS EW2ABu	**6/6/11**	**46**
MBS EW-2AR	**5/10/12**	**15**
MBS EW4ABu	**6/6/11**	**22**
MBS EW-4Bu	**6/3/11**	**19**
MBS EW5ABu	**6/20/11**	**21**
MBS EW6ABu	5/27/11	0.2J
MBS EW7ABu	5/20/11	<0.3J

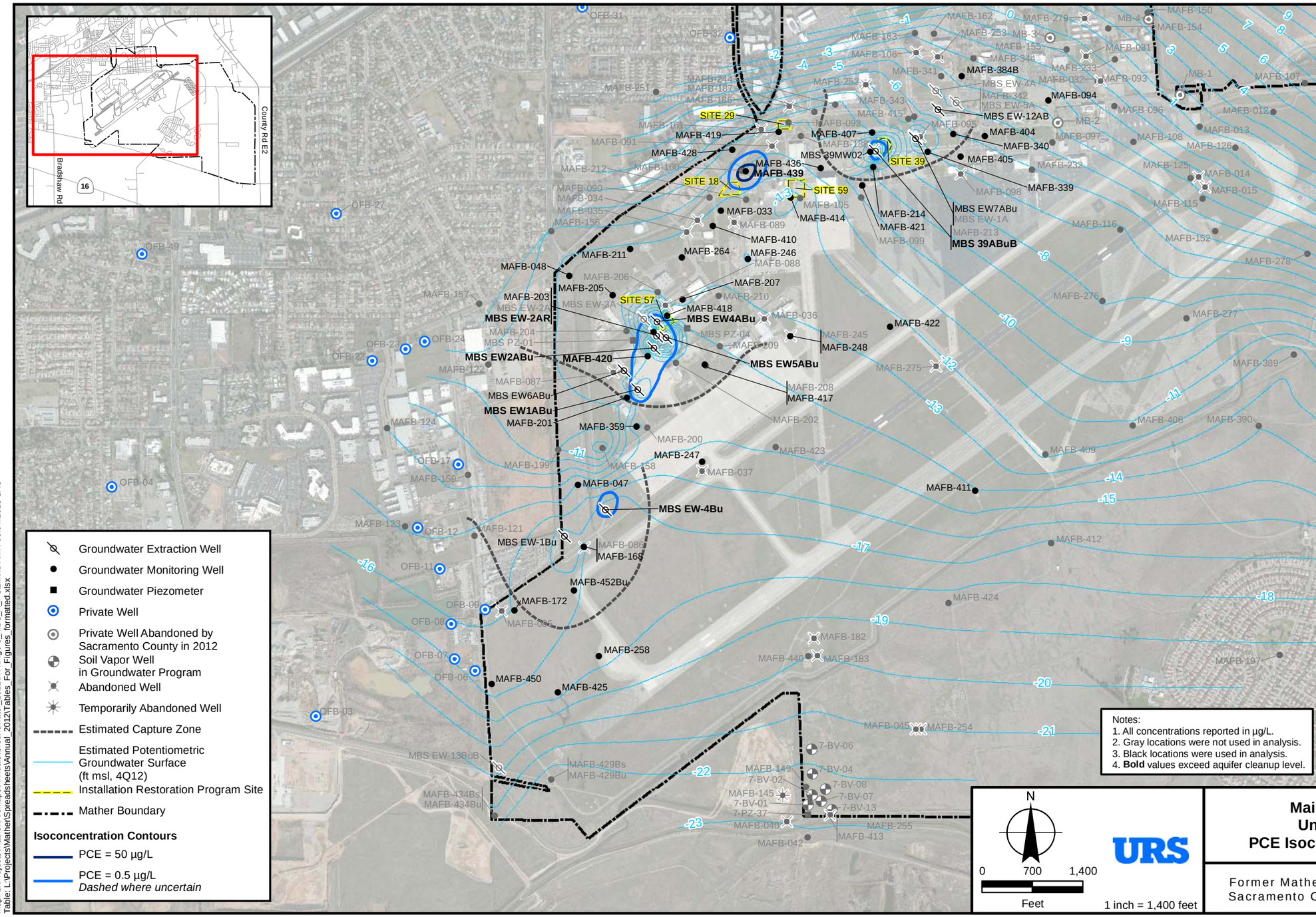
Notes:
1. All concentrations reported in µg/L.
2. Gray locations were not used in analysis.
3. Black locations were used in analysis.
4. **Bold** values exceed aquifer cleanup level.

Main Base/SAC Area
Unit A/Water Table
TCE Isoconcentration Contours

Former Mather Air Force Base
Sacramento County, California

Figure 6-2

Map: L:\Projects\Mather\ArcMaps\Annuals\Groundwater_2012\ITRFig6-2_MBS_A_TCE.mxd AMN 06.04.2013 SAC
Table: L:\Projects\Mather\Spreadsheets\Annual_2012\Tables_For_Figures_formatted.xlsx



LOCATION	DATE	PCE
MAFB-033	6/3/11	0.3J
MAFB-047	6/10/11	<0.1
MAFB-048	6/10/11	3.5
MAFB-094	5/11/11	<0.1
MAFB-168	6/20/11	2.1
MAFB-172	6/17/11	0.1J
MAFB-201	5/31/11	<0.1
MAFB-203	5/31/11	4.7
MAFB-205	6/1/11	<0.1
MAFB-207	5/31/11	1.3
MAFB-211	6/9/11	<0.1
MAFB-214	3/6/12	0.3J
MAFB-246	6/7/11	<0.1
MAFB-247	5/18/11	<0.1
MAFB-248	5/20/11	0.1J
MAFB-258	6/17/11	0.2J
MAFB-264	6/2/11	2.6
MAFB-339	6/7/11	0.3J
MAFB-340	6/7/11	<0.1
MAFB-359	5/27/11	0.5J
MAFB-384B	5/27/11	0.3J
MAFB-404	5/13/11	<0.1
MAFB-405	5/13/11	2.3
MAFB-407	3/5/12	0.4J
MAFB-410	6/3/11	3.5
MAFB-411	5/19/11	1.2
MAFB-414	6/17/11	1.3
MAFB-417	6/1/11	0.8
MAFB-418	6/1/11	4.5
MAFB-419	11/8/12	<0.1
MAFB-420	**5/19/11**	**47**
MAFB-421	3/5/12	2
MAFB-422	5/18/11	<0.1
MAFB-425	6/7/11	1
MAFB-428	6/20/11	0.3J
MAFB-436	5/4/12	4.8
MAFB-439	**6/17/11**	**69**
MAFB-450	6/7/11	<0.1
MAFB-452Bu	5/18/11	3.4
MBS 39ABuB	**3/5/12**	**5.3**
MBS 39MW02	3/6/12	0.2J
MBS EW-12AB	5/11/12	0.9
MBS EW-1Bu	5/24/11	0.5J
MBS EW-2AR	**5/10/12**	**7.5**
MBS EW-4Bu	**6/3/11**	**6.6**
MBS EW1ABu	**5/25/11**	**14**
MBS EW2ABu	**6/6/11**	**16**
MBS EW4ABu	**6/6/11**	**5.8**
MBS EW5ABu	**6/20/11**	**7.2**
MBS EW6ABu	5/15/12	0.2J
MBS EW7ABu	5/15/12	1.5

Notes:
1. All concentrations reported in µg/L.
2. Gray locations were not used in analysis.
3. Black locations were used in analysis.
4. **Bold** values exceed aquifer cleanup level.

Main Base/SAC Area
Unit A/Water Table
PCE Isoconcentration Contours

Former Mather Air Force Base
Sacramento County, California

Figure 6-3

Map: L:\Projects\Mather\ArcMaps\Annuals\Groundwater_2012\ITR\Fig6-3_MBS_A_PCE.mxd AMN 06.04.2013 SAC
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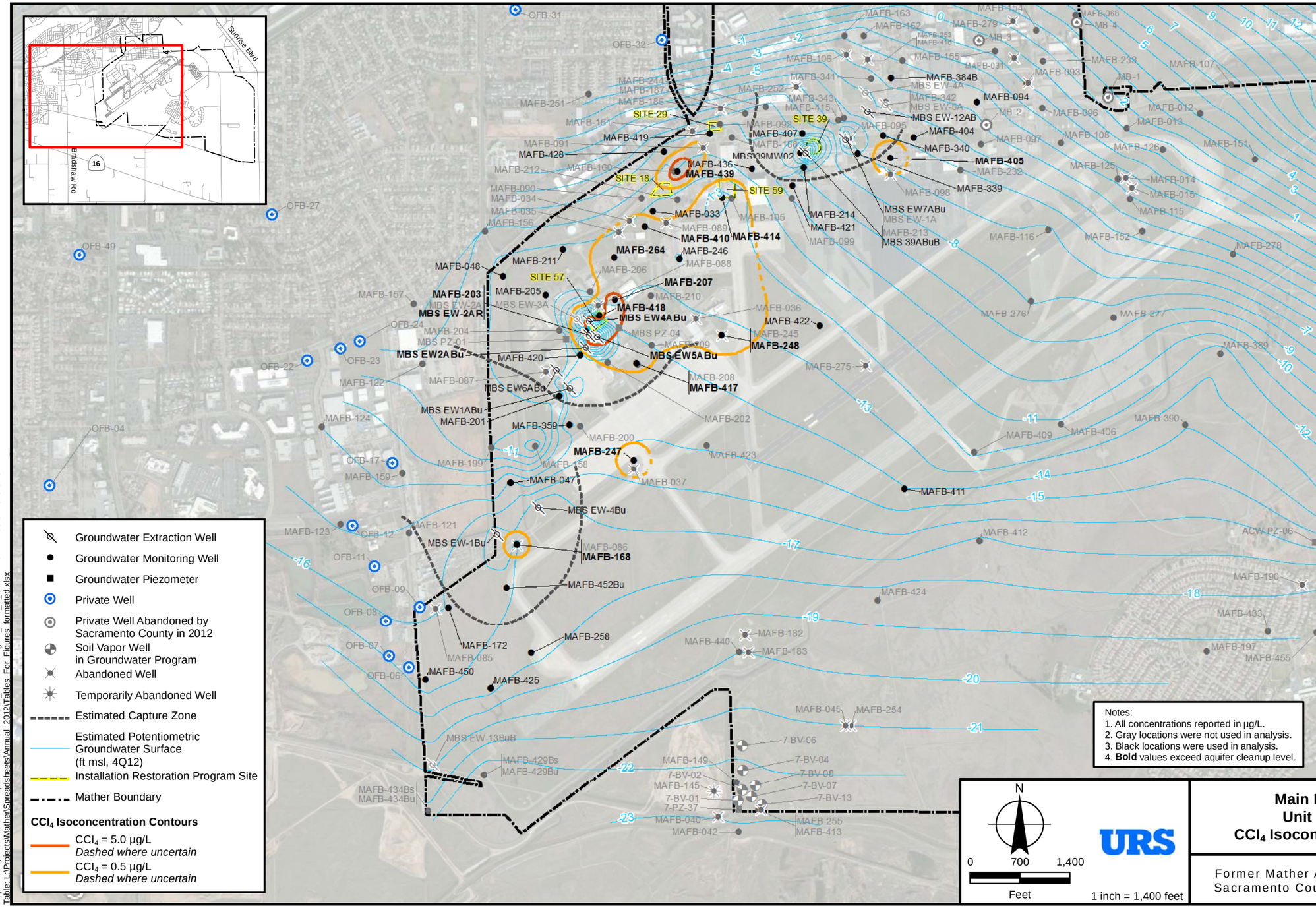

Groundwater Extraction Well
Groundwater Monitoring Well
Groundwater Piezometer
Private Well
Private Well Abandoned by Sacramento County in 2012
Soil Vapor Well in Groundwater Program
Abandoned Well
Temporarily Abandoned Well
Estimated Capture Zone
Estimated Potentiometric Groundwater Surface (ft msl, 4Q12)
Installation Restoration Program Site
Mather Boundary

CCl_4 Isoconcentration Contours

CCl_4 = 5.0 µg/L
Dashed where uncertain

CCl_4 = 0.5 µg/L
Dashed where uncertain

LOCATION	DATE	CCl_4
MAFB-033	6/3/11	<0.1
MAFB-047	6/10/11	<0.1
MAFB-048	6/10/11	<0.1
MAFB-094	5/11/11	0.1F
MAFB-168	**6/20/11**	**0.5**
MAFB-172	6/17/11	<0.1
MAFB-201	5/31/11	<0.1
MAFB-203	**5/31/11**	**0.8**
MAFB-205	6/1/11	<0.1
MAFB-207	**5/31/11**	**43**
MAFB-211	6/9/11	<0.1
MAFB-214	3/6/12	<0.1
MAFB-246	6/7/11	0.3J
MAFB-247	**5/18/11**	**0.7**
MAFB-248	**5/20/11**	**1.1**
MAFB-258	6/17/11	<0.1
MAFB-264	**6/2/11**	**3.9**
MAFB-339	6/7/11	<0.1
MAFB-340	6/7/11	<0.1
MAFB-359	5/27/11	<0.1
MAFB-384B	5/27/11	<0.1
MAFB-404	5/13/11	<0.1
MAFB-405	**5/13/11**	**0.8**
MAFB-407	3/5/12	<0.1
MAFB-410	**6/3/11**	**1.5**
MAFB-411	5/19/11	<0.1
MAFB-414	**6/17/11**	**3.4**
MAFB-417	**6/1/11**	**1.5**
MAFB-418	**6/1/11**	**4.3**
MAFB-419	11/8/12	<0.1
MAFB-420	5/19/11	0.3J
MAFB-421	3/5/12	<0.1
MAFB-422	5/18/11	<0.1
MAFB-425	6/7/11	<0.1
MAFB-428	6/20/11	<0.1
MAFB-436	5/4/12	0.2J
MAFB-439	**6/17/11**	**8.1**
MAFB-450	6/7/11	<0.1
MAFB-452Bu	5/18/11	<0.1
MBS 39ABuB	3/5/12	<0.1
MBS 39MW02	3/6/12	<0.1
MBS EW-12AB	5/11/12	<0.1
MBS EW-1Bu	5/24/11	<0.1
MBS EW-2AR	**5/10/12**	**12**
MBS EW-4Bu	6/3/11	0.4J
MBS EW1ABu	5/25/11	0.3J
MBS EW2ABu	**6/6/11**	**6.8**
MBS EW4ABu	**6/6/11**	**11**
MBS EW5ABu	**6/20/11**	**29**
MBS EW6ABu	5/15/12	<0.1
MBS EW7ABu	5/15/12	<0.1

Notes:
1. All concentrations reported in µg/L.
2. Gray locations were not used in analysis.
3. Black locations were used in analysis.
4. **Bold** values exceed aquifer cleanup level.

N

0 700 1,400
Feet

1 inch = 1,400 feet

URS

Main Base/SAC Area
Unit A/Water Table
CCl_4 Isoconcentration Contours

Former Mather Air Force Base
Sacramento County, California

Figure 6-4

Map: L:\Projects\Mather\ArcMaps\Annuals\Groundwater_2012\ITR\Fig6-4_MBS_A_CCL4.mxd AMN 06.04.2013 SAC
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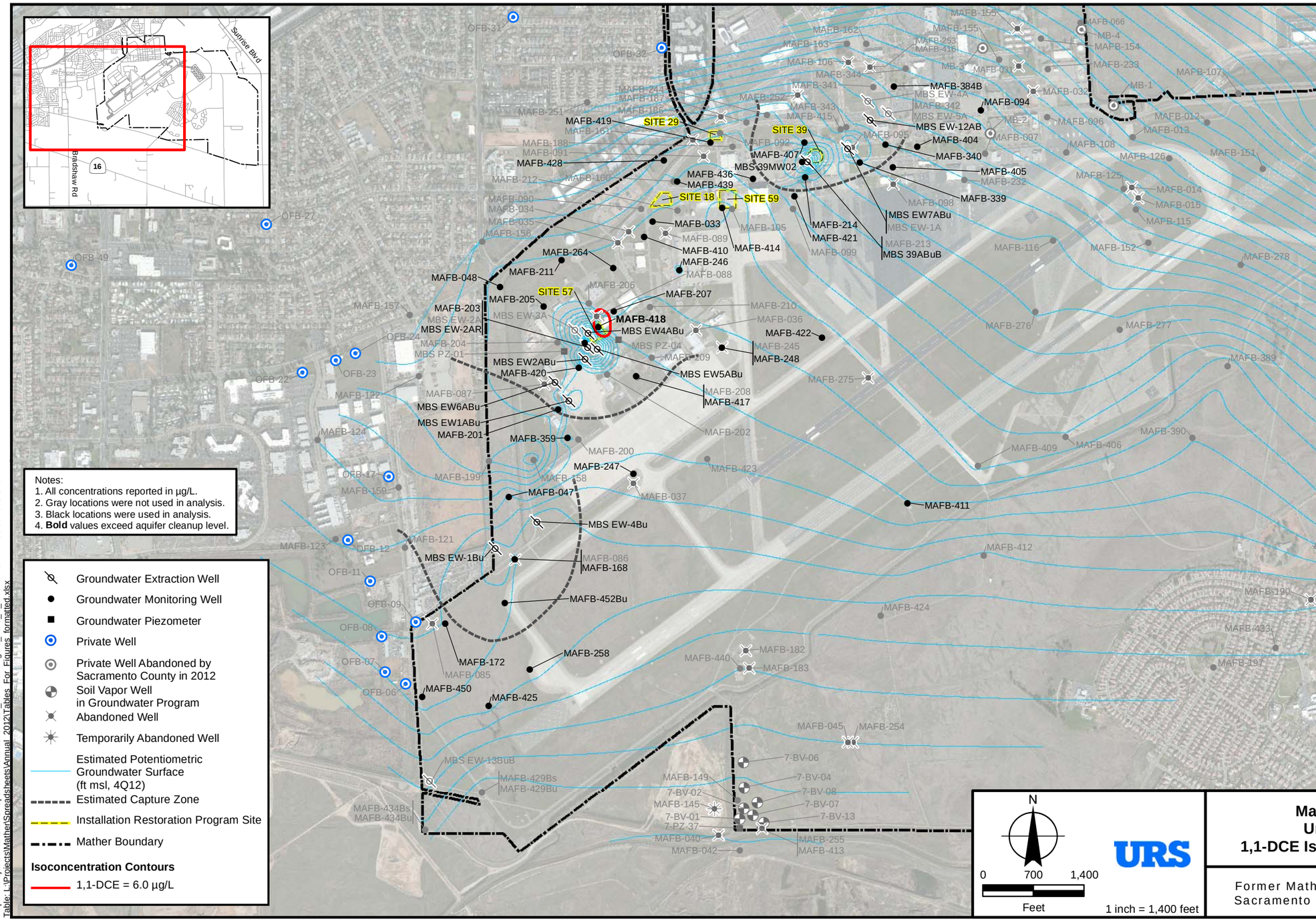


Notes:
1. All concentrations reported in µg/L.
2. Gray locations were not used in analysis.
3. Black locations were used in analysis.
4. **Bold** values exceed aquifer cleanup level.

- Groundwater Extraction Well
- Groundwater Monitoring Well
- Groundwater Piezometer
- Private Well
- Private Well Abandoned by Sacramento County in 2012
- Soil Vapor Well in Groundwater Program
- Abandoned Well
- Temporarily Abandoned Well
- Estimated Potentiometric Groundwater Surface (ft msl, 4Q12)
- Estimated Capture Zone
- Installation Restoration Program Site
- Mather Boundary

Isoconcentration Contours

- 1,1-DCE = 6.0 µg/L

N

0 700 1,400

Feet

1 inch = 1,400 feet

URS

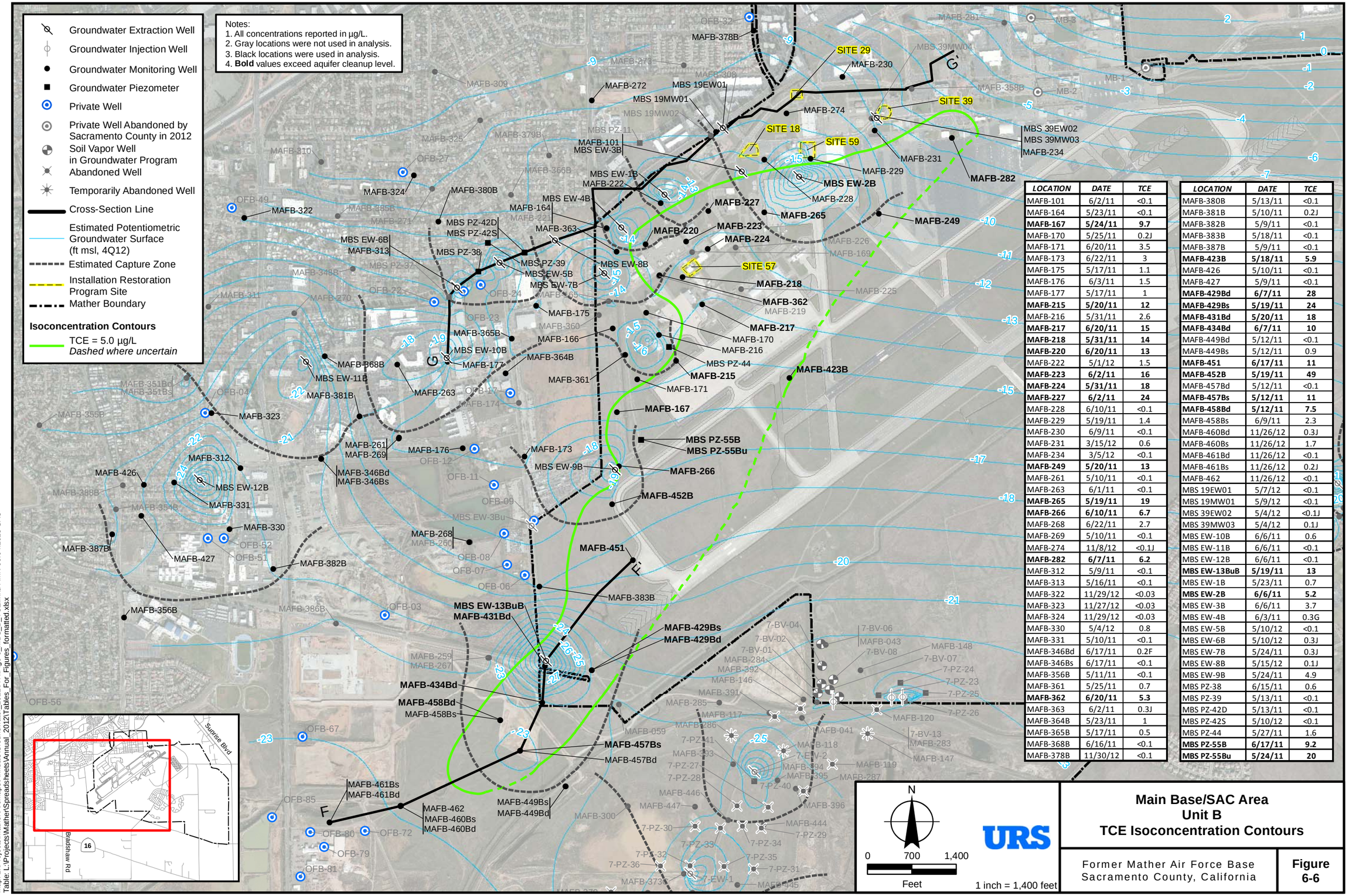
LOCATION	DATE	1,1-DCE
MAFB-033	6/3/2011	<0.1
MAFB-047	6/10/2011	<0.2
MAFB-048	6/10/2011	<0.2
MAFB-094	5/11/2011	<0.1
MAFB-168	6/20/2011	<0.2
MAFB-172	6/17/2011	<0.2
MAFB-201	5/31/2011	<0.1
MAFB-203	5/31/2011	1.8
MAFB-205	6/1/2011	<0.1
MAFB-207	5/31/2011	0.2
MAFB-211	6/9/2011	<0.2
MAFB-214	3/6/2012	<0.1
MAFB-246	6/7/2011	<0.1
MAFB-247	5/18/2011	0.2J
MAFB-248	5/20/2011	0.5
MAFB-258	6/17/2011	<0.2
MAFB-264	6/2/2011	0.6
MAFB-339	6/7/2011	<0.1
MAFB-340	6/7/2011	<0.1
MAFB-359	5/27/2011	<0.1
MAFB-384B	5/27/2011	<0.1
MAFB-404	5/13/2011	<0.1
MAFB-405	5/13/2011	<0.1
MAFB-407	3/5/2012	<0.1
MAFB-410	6/3/2011	<0.1
MAFB-411	5/19/2011	3.2
MAFB-414	6/17/2011	<0.2
MAFB-417	6/1/2011	<0.1
MAFB-418	**6/1/2011**	**6.4**
MAFB-419	11/8/2012	<0.1
MAFB-420	5/19/2011	3
MAFB-421	3/5/2012	<0.1
MAFB-422	5/18/2011	<0.1
MAFB-425	6/7/2011	<0.2
MAFB-428	6/20/2011	<0.2
MAFB-436	5/4/2012	<0.2
MAFB-439	6/17/2011	<0.2
MAFB-450	6/7/2011	<0.2
MAFB-452Bu	5/18/2011	0.2J
MBS 39ABuB	3/5/2012	<0.1
MBS 39MW02	3/6/2012	<0.1
MBS EW-12AB	5/11/2012	<0.1
MBS EW-1Bu	5/24/2011	<0.1
MBS EW-2AR	5/10/2012	1.2
MBS EW-4Bu	6/3/2011	0.3J
MBS EW1ABu	5/25/2011	1.5
MBS EW2ABu	6/6/2011	1.5
MBS EW4ABu	6/6/2011	1.9
MBS EW5ABu	6/20/2011	2.4
MBS EW6ABu	5/15/2012	<0.1
MBS EW7ABu	5/15/2012	<0.1

Main Base/SAC Area
Unit A/Water Table
1,1-DCE Isoconcentration Contours

Former Mather Air Force Base
Sacramento County, California

Figure 6-5

Map: L:\Projects\Mather\ArcMaps\Annuals\Groundwater_2012\ITRVFig6-5_MBS_A_1DCE.mxd AMN 06.04.2013 SAC
Table: L:\Projects\Mather\Spreadsheets\Annual_2012\Tables_For_Figures_formatted.xlsx



LOCATION	DATE	TCE
MAFB-101	6/2/11	<0.1
MAFB-164	5/23/11	<0.1
MAFB-167	**5/24/11**	**9.7**
MAFB-170	5/25/11	0.2J
MAFB-171	6/20/11	3.5
MAFB-173	6/22/11	3
MAFB-175	5/17/11	1.1
MAFB-176	6/3/11	1.5
MAFB-177	5/17/11	1
MAFB-215	**5/20/11**	**12**
MAFB-216	5/31/11	2.6
MAFB-217	**6/20/11**	**15**
MAFB-218	**5/31/11**	**14**
MAFB-220	**6/20/11**	**13**
MAFB-222	5/1/12	1.5
MAFB-223	**6/2/11**	**16**
MAFB-224	**5/31/11**	**18**
MAFB-227	**6/2/11**	**24**
MAFB-228	6/10/11	<0.1
MAFB-229	5/19/11	1.4
MAFB-230	6/9/11	<0.1
MAFB-231	3/15/12	0.6
MAFB-234	3/5/12	<0.1
MAFB-249	**5/20/11**	**13**
MAFB-261	5/10/11	<0.1
MAFB-263	6/1/11	<0.1
MAFB-265	**5/19/11**	**19**
MAFB-266	**6/10/11**	**6.7**
MAFB-268	6/22/11	2.7
MAFB-269	5/10/11	<0.1
MAFB-274	11/8/12	<0.1J
MAFB-282	**6/7/11**	**6.2**
MAFB-312	5/9/11	<0.1
MAFB-313	5/16/11	<0.1
MAFB-322	11/29/12	<0.03
MAFB-323	11/27/12	<0.03
MAFB-324	11/29/12	<0.03
MAFB-330	5/4/12	0.8
MAFB-331	5/10/11	<0.1
MAFB-346Bd	6/17/11	0.2F
MAFB-346Bs	6/17/11	<0.1
MAFB-356B	5/11/11	<0.1
MAFB-361	5/25/11	0.7
MAFB-362	**6/20/11**	**5.3**
MAFB-363	6/2/11	0.3J
MAFB-364B	5/23/11	1
MAFB-365B	5/17/11	0.5
MAFB-368B	6/16/11	<0.1
MAFB-378B	11/30/12	<0.1

LOCATION	DATE	TCE
MAFB-380B	5/13/11	<0.1
MAFB-381B	5/10/11	0.2J
MAFB-382B	5/9/11	<0.1
MAFB-383B	5/18/11	<0.1
MAFB-387B	5/9/11	<0.1
MAFB-423B	**5/18/11**	**5.9**
MAFB-426	5/10/11	<0.1
MAFB-427	5/9/11	<0.1
MAFB-429Bd	**6/7/11**	**28**
MAFB-429Bs	**5/19/11**	**24**
MAFB-431Bd	**5/20/11**	**18**
MAFB-434Bd	**6/7/11**	**10**
MAFB-449Bd	5/12/11	<0.1
MAFB-449Bs	5/12/11	0.9
MAFB-451	**6/17/11**	**11**
MAFB-452B	**5/19/11**	**49**
MAFB-457Bd	5/12/11	<0.1
MAFB-457Bs	**5/12/11**	**11**
MAFB-458Bd	**5/12/11**	**7.5**
MAFB-458Bs	6/9/11	2.3
MAFB-460Bd	11/26/12	0.3J
MAFB-460Bs	11/26/12	1.7
MAFB-461Bd	11/26/12	<0.1
MAFB-461Bs	11/26/12	0.2J
MAFB-462	11/26/12	<0.1
MBS 19EW01	5/7/12	<0.1
MBS 19MW01	5/9/12	<0.1
MBS 39EW02	5/4/12	<0.1J
MBS 39MW03	5/4/12	0.1J
MBS EW-10B	6/6/11	0.6
MBS EW-11B	6/6/11	<0.1
MBS EW-12B	6/6/11	<0.1
MBS EW-13BuB	**5/19/11**	**13**
MBS EW-1B	5/23/11	0.7
MBS EW-2B	**6/6/11**	**5.2**
MBS EW-3B	6/6/11	3.7
MBS EW-4B	6/3/11	0.3G
MBS EW-5B	5/10/12	<0.1
MBS EW-6B	5/10/12	0.3J
MBS EW-7B	5/24/11	0.3J
MBS EW-8B	5/15/12	0.1J
MBS EW-9B	5/24/11	4.9
MBS PZ-38	6/15/11	0.6
MBS PZ-39	5/13/11	<0.1
MBS PZ-42D	5/13/11	<0.1
MBS PZ-42S	5/10/12	<0.1
MBS PZ-44	5/27/11	1.6
MBS PZ-55B	**6/17/11**	**9.2**
MBS PZ-55Bu	**5/24/11**	**20**

Main Base/SAC Area
Unit B
TCE Isoconcentration Contours

Former Mather Air Force Base
Sacramento County, California

Figure 6-6

Map: L:\Projects\Mather\ArcMaps\Annuals\Groundwater_2012\TR\Fig6-6_MBS_B_TCE.mxd AMN 06.04.2013 SAC
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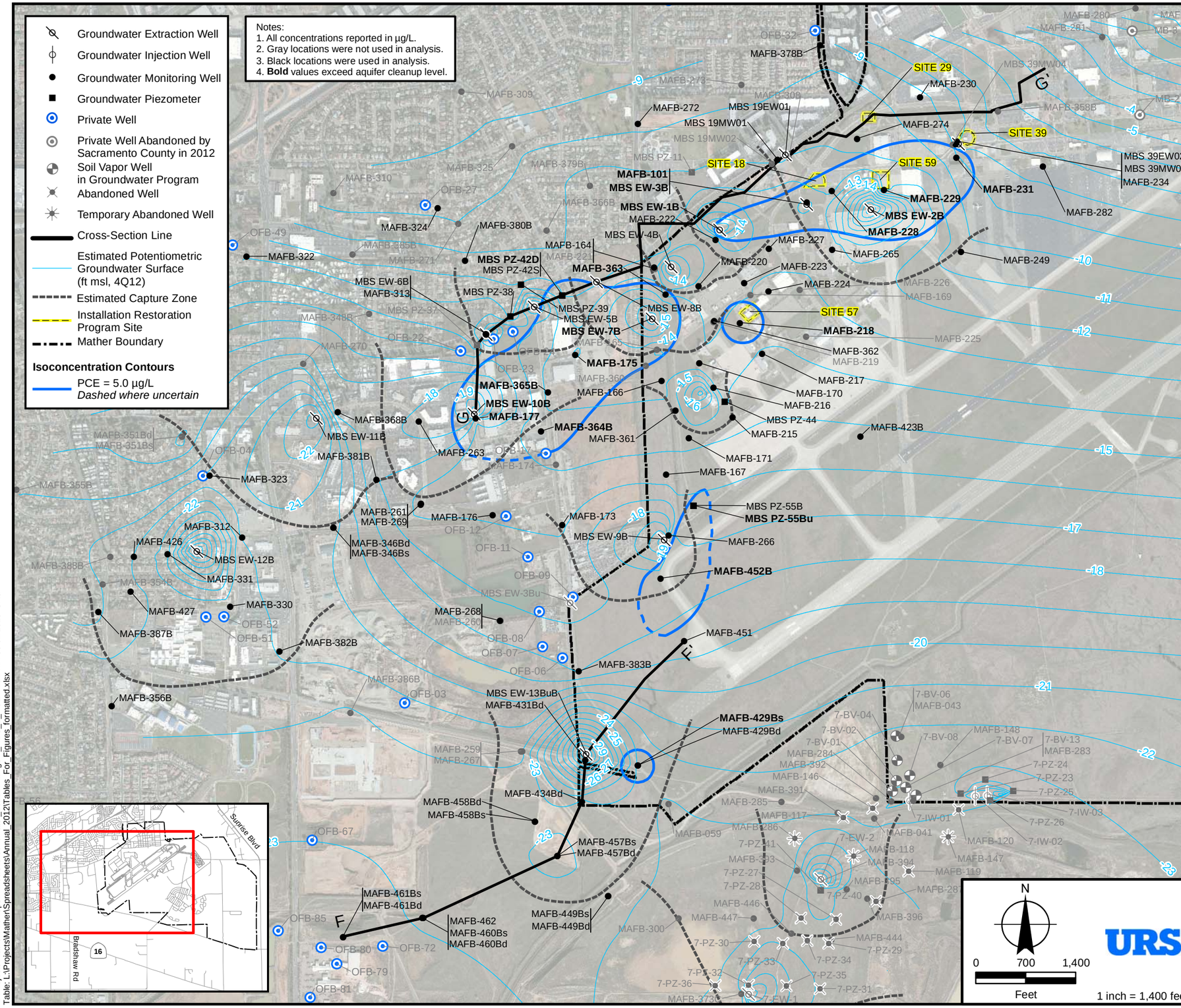

LOCATION	DATE	PCE
MAFB-101	**6/2/11**	**7.9**
MAFB-164	5/23/11	3
MAFB-167	5/24/11	2.6
MAFB-170	5/25/11	0.3F
MAFB-171	6/20/11	1.4
MAFB-173	6/22/11	1.4
MAFB-175	**5/17/11**	**34**
MAFB-176	6/3/11	<0.1
MAFB-177	**5/17/11**	**13**
MAFB-215	5/20/11	3.8
MAFB-216	5/31/11	1.4
MAFB-217	6/20/11	0.3F
MAFB-218	**5/31/11**	**8.7**
MAFB-220	6/20/11	2
MAFB-222	5/1/12	3.5
MAFB-223	6/2/11	1.8
MAFB-224	5/31/11	1.1
MAFB-227	6/2/11	2.6
MAFB-228	**6/10/11**	**7.8**
MAFB-229	**5/19/11**	**22**
MAFB-230	6/9/11	<0.1
MAFB-231	**3/5/12**	**8.2**
MAFB-234	3/5/12	1.8
MAFB-249	5/20/11	0.5
MAFB-261	5/10/11	2.6
MAFB-263	6/1/11	<0.1
MAFB-265	5/19/11	3.3
MAFB-266	6/10/11	2.3
MAFB-268	6/22/11	1.8
MAFB-269	5/10/11	<0.1
MAFB-274	11/8/12	1
MAFB-282	6/7/11	0.4F
MAFB-312	5/9/11	2.1
MAFB-313	5/16/11	1.1
MAFB-322	11/29/12	0.088J
MAFB-323	11/27/12	0.076J
MAFB-324	11/29/12	0.25
MAFB-330	5/4/12	0.64
MAFB-331	5/10/11	<0.1
MAFB-346Bd	6/17/11	0.4F
MAFB-346Bs	6/17/11	4.8
MAFB-356B	5/11/11	<0.1
MAFB-361	5/25/11	0.6
MAFB-362	6/20/11	3.8
MAFB-363	**6/2/11**	**5.5**
MAFB-364B	**5/23/11**	**8.3**
MAFB-365B	**5/17/11**	**9.7**
MAFB-368B	6/16/11	2.1
MAFB-378B	11/30/12	<0.1

LOCATION	DATE	PCE
MAFB-380B	5/13/11	0.4F
MAFB-381B	5/10/11	3.8
MAFB-382B	5/9/11	<0.1
MAFB-383B	5/18/11	<0.1
MAFB-387B	5/9/11	<0.1
MAFB-423B	5/18/11	0.1F
MAFB-426	5/10/11	<0.1
MAFB-427	5/9/11	<0.1
MAFB-429Bd	6/7/11	4.7
MAFB-429Bs	**5/19/11**	**5.1**
MAFB-431Bd	5/20/11	2.8
MAFB-434Bd	6/7/11	2.1
MAFB-449Bd	5/12/11	<0.1
MAFB-449Bs	5/12/11	0.3F
MAFB-451	6/17/11	3.1
MAFB-452B	**5/19/11**	**12**
MAFB-457Bd	5/12/11	<0.1
MAFB-457Bs	5/12/11	2.1
MAFB-458Bd	5/12/11	0.9
MAFB-458Bs	6/9/11	0.4JF
MAFB-460Bd	11/26/12	<0.1
MAFB-460Bs	11/26/12	0.2J
MAFB-461Bd	11/26/12	<0.1
MAFB-461Bs	11/26/12	<0.1
MAFB-462	11/26/12	<0.1
MBS 19EW01	5/7/12	0.8
MBS 19MW01	5/9/12	1.5
MBS 39EW02	5/4/12	1.9
MBS 39MW03	5/4/12	2.1
MBS EW-10B	**6/6/11**	**11**
MBS EW-11B	6/6/11	2.4
MBS EW-12B	6/6/11	<0.1
MBS EW-13BuB	5/19/11	2.5
MBS EW-1B	**5/23/11**	**5.1**
MBS EW-2B	**6/6/11**	**21**
MBS EW-3B	**6/6/11**	**9.5**
MBS EW-4B	6/3/11	3.4
MBS EW-5B	5/10/12	4.9
MBS EW-6B	5/10/12	1.9
MBS EW-7B	**5/24/11**	**5**
MBS EW-8B	5/15/12	2.8
MBS EW-9B	5/24/11	1.7
MBS PZ-38	6/15/11	2.9
MBS PZ-39	5/13/11	2.7
MBS PZ-42D	**5/13/11**	**6.2**
MBS PZ-42S	5/10/12	2.7
MBS PZ-44	5/27/11	0.6
MBS PZ-55B	6/17/11	4.5J
MBS PZ-55Bu	**5/24/11**	**6.8**

Main Base/SAC Area
Unit B
PCE Isoconcentration Contours

Former Mather Air Force Base
Sacramento County, California

Figure 6-7

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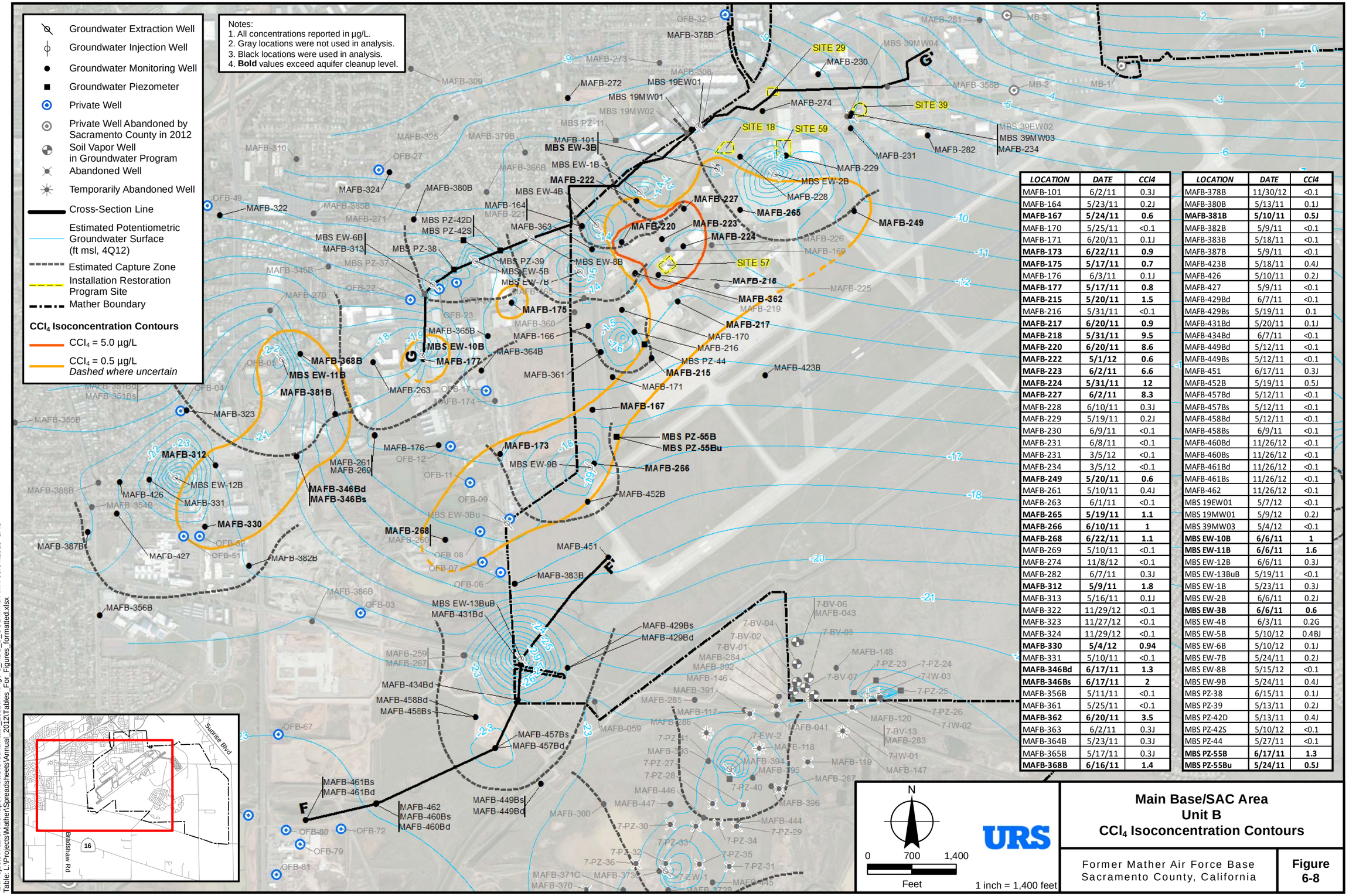

LOCATION	DATE	CCl4
MAFB-101	6/2/11	0.3J
MAFB-164	5/23/11	0.2J
MAFB-167	**5/24/11**	**0.6**
MAFB-170	5/25/11	<0.1
MAFB-171	6/20/11	0.1J
MAFB-173	**6/22/11**	**0.9**
MAFB-175	**5/17/11**	**0.7**
MAFB-176	6/3/11	0.1J
MAFB-177	**5/17/11**	**0.8**
MAFB-215	**5/20/11**	**1.5**
MAFB-216	5/31/11	<0.1
MAFB-217	**6/20/11**	**0.9**
MAFB-218	**5/31/11**	**9.5**
MAFB-220	**6/20/11**	**8.6**
MAFB-222	**5/1/12**	**0.6**
MAFB-223	**6/2/11**	**6.6**
MAFB-224	**5/31/11**	**12**
MAFB-227	**6/2/11**	**8.3**
MAFB-228	6/10/11	0.3J
MAFB-229	5/19/11	0.2J
MAFB-230	6/9/11	<0.1
MAFB-231	6/8/11	<0.1
MAFB-231	3/5/12	<0.1
MAFB-234	3/5/12	<0.1
MAFB-249	**5/20/11**	**0.6**
MAFB-261	5/10/11	0.4J
MAFB-263	6/1/11	<0.1
MAFB-265	**5/19/11**	**1.1**
MAFB-266	**6/10/11**	**1**
MAFB-268	**6/22/11**	**1.1**
MAFB-269	5/10/11	<0.1
MAFB-274	11/8/12	<0.1
MAFB-282	6/7/11	0.3J
MAFB-312	**5/9/11**	**1.8**
MAFB-313	5/16/11	0.1J
MAFB-322	11/29/12	<0.1
MAFB-323	11/27/12	<0.1
MAFB-324	11/29/12	<0.1
MAFB-330	**5/4/12**	**0.94**
MAFB-331	5/10/11	<0.1
MAFB-346Bd	**6/17/11**	**1.3**
MAFB-346Bs	**6/17/11**	**2**
MAFB-356B	5/11/11	<0.1
MAFB-361	5/25/11	<0.1
MAFB-362	**6/20/11**	**3.5**
MAFB-363	6/2/11	0.3J
MAFB-364B	5/23/11	0.3J
MAFB-365B	5/17/11	0.3J
MAFB-368B	**6/16/11**	**1.4**

LOCATION	DATE	CCl4
MAFB-378B	11/30/12	<0.1
MAFB-380B	5/13/11	0.1J
MAFB-381B	**5/10/11**	**0.5J**
MAFB-382B	5/9/11	<0.1
MAFB-383B	5/18/11	<0.1
MAFB-387B	5/9/11	<0.1
MAFB-423B	5/18/11	0.4J
MAFB-426	5/10/11	0.2J
MAFB-427	5/9/11	<0.1
MAFB-429Bd	6/7/11	<0.1
MAFB-429Bs	5/19/11	0.1
MAFB-431Bd	5/20/11	0.1J
MAFB-434Bd	6/7/11	<0.1
MAFB-449Bd	5/12/11	<0.1
MAFB-449Bs	5/12/11	<0.1
MAFB-451	6/17/11	0.3J
MAFB-452B	5/19/11	0.5J
MAFB-457Bd	5/12/11	<0.1
MAFB-457Bs	5/12/11	<0.1
MAFB-458Bd	5/12/11	<0.1
MAFB-458Bs	6/9/11	<0.1
MAFB-460Bd	11/26/12	<0.1
MAFB-460Bs	11/26/12	<0.1
MAFB-461Bd	11/26/12	<0.1
MAFB-461Bs	11/26/12	<0.1
MAFB-462	11/26/12	<0.1
MBS 19EW01	5/7/12	<0.1
MBS 19MW01	5/9/12	0.2J
MBS 39MW03	5/4/12	<0.1
MBS EW-10B	**6/6/11**	**1**
MBS EW-11B	**6/6/11**	**1.6**
MBS EW-12B	6/6/11	0.3J
MBS EW-13BuB	5/19/11	<0.1
MBS EW-1B	5/23/11	0.3J
MBS EW-2B	6/6/11	0.2J
MBS EW-3B	**6/6/11**	**0.6**
MBS EW-4B	6/3/11	0.2G
MBS EW-5B	5/10/12	0.4BJ
MBS EW-6B	5/10/12	0.1J
MBS EW-7B	5/24/11	0.2J
MBS EW-8B	5/15/12	<0.1
MBS EW-9B	5/24/11	0.4J
MBS PZ-38	6/15/11	0.1J
MBS PZ-39	5/13/11	0.2J
MBS PZ-42D	5/13/11	0.4J
MBS PZ-42S	5/10/12	<0.1
MBS PZ-44	5/27/11	<0.1
MBS PZ-55B	**6/17/11**	**1.3**
MBS PZ-55Bu	**5/24/11**	**0.5J**

Main Base/SAC Area
Unit B
CCl_4 Isoconcentration Contours

Former Mather Air Force Base
Sacramento County, California

Figure 6-8

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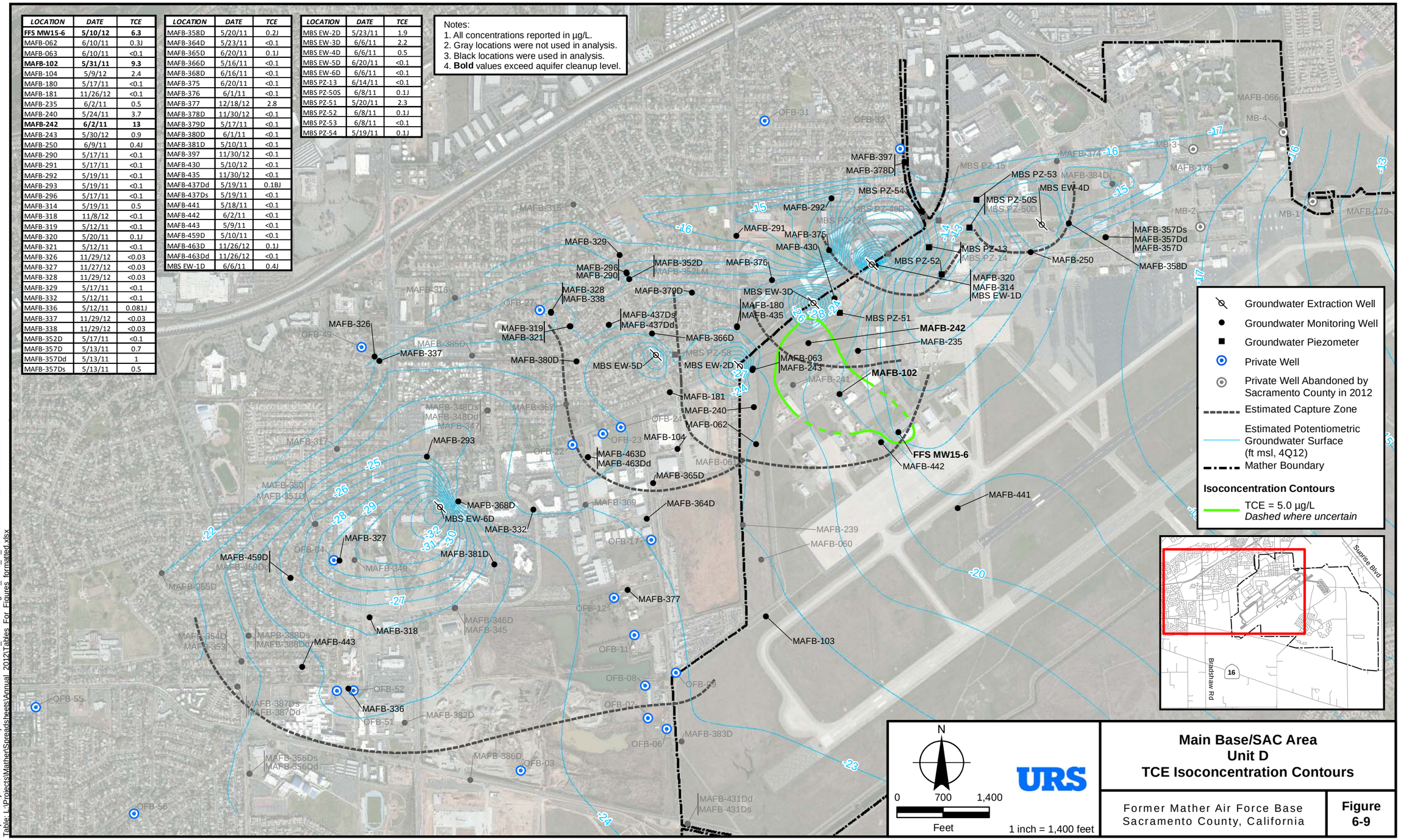
LOCATION	DATE	TCE
FFS MW15-6	**5/10/12**	**6.3**
MAFB-062	6/10/11	0.3J
MAFB-063	6/10/11	<0.1
MAFB-102	**5/31/11**	**9.3**
MAFB-104	5/9/12	2.4
MAFB-180	5/17/11	<0.1
MAFB-181	11/26/12	<0.1
MAFB-235	6/2/11	0.5
MAFB-240	5/24/11	3.7
MAFB-242	**6/2/11**	**13**
MAFB-243	5/30/12	0.9
MAFB-250	6/9/11	0.4J
MAFB-290	5/17/11	<0.1
MAFB-291	5/17/11	<0.1
MAFB-292	5/19/11	<0.1
MAFB-293	5/19/11	<0.1
MAFB-296	5/17/11	<0.1
MAFB-314	5/19/11	0.5
MAFB-318	11/8/12	<0.1
MAFB-319	5/12/11	<0.1
MAFB-320	5/20/11	0.1J
MAFB-321	5/12/11	<0.1
MAFB-326	11/29/12	<0.03
MAFB-327	11/27/12	<0.03
MAFB-328	11/29/12	<0.03
MAFB-329	5/17/11	<0.1
MAFB-332	5/12/11	<0.1
MAFB-336	5/12/11	0.081J
MAFB-337	11/29/12	<0.03
MAFB-338	11/29/12	<0.03
MAFB-352D	5/17/11	<0.1
MAFB-357D	5/13/11	0.7
MAFB-357Dd	5/13/11	1
MAFB-357Ds	5/13/11	0.5

LOCATION	DATE	TCE
MAFB-358D	5/20/11	0.2J
MAFB-364D	5/23/11	<0.1
MAFB-365D	6/20/11	0.1J
MAFB-366D	5/16/11	<0.1
MAFB-368D	6/16/11	<0.1
MAFB-375	6/20/11	<0.1
MAFB-376	6/1/11	<0.1
MAFB-377	12/18/12	2.8
MAFB-378D	11/30/12	<0.1
MAFB-379D	5/17/11	<0.1
MAFB-380D	6/1/11	<0.1
MAFB-381D	5/10/11	<0.1
MAFB-397	11/30/12	<0.1
MAFB-430	5/10/12	<0.1
MAFB-435	11/30/12	<0.1
MAFB-437Dd	5/19/11	0.1BJ
MAFB-437Ds	5/19/11	<0.1
MAFB-441	5/18/11	<0.1
MAFB-442	6/2/11	<0.1
MAFB-443	5/9/11	<0.1
MAFB-459D	5/10/11	<0.1
MAFB-463D	11/26/12	0.1J
MAFB-463Dd	11/26/12	<0.1
MBS EW-1D	6/6/11	0.4J

LOCATION	DATE	TCE
MBS EW-2D	5/23/11	1.9
MBS EW-3D	6/6/11	2.2
MBS EW-4D	6/6/11	0.5
MBS EW-5D	6/20/11	<0.1
MBS EW-6D	6/6/11	<0.1
MBS PZ-13	6/14/11	<0.1
MBS PZ-50S	6/8/11	0.1J
MBS PZ-51	5/20/11	2.3
MBS PZ-52	6/8/11	0.1J
MBS PZ-53	6/8/11	<0.1
MBS PZ-54	5/19/11	0.1J

Notes:
1. All concentrations reported in µg/L.
2. Gray locations were not used in analysis.
3. Black locations were used in analysis.
4. **Bold** values exceed aquifer cleanup level.



Main Base/SAC Area
Unit D
TCE Isoconcentration Contours

Former Mather Air Force Base
Sacramento County, California

Figure 6-9

Map: L:\Projects\Mather\ArcMaps\Annuals\Groundwater_2012\ITRFig6-9_MBS_D_TCE.mxd AMN 06.04.2013 SAC
Table: L:\Projects\Mather\Spreadsheets\Annual_2012\Tables_For_Figures_formatted.xlsx

LOCATION	DATE	PCE
FFS MW15-6	5/10/12	4
MAFB-062	6/10/11	0.2F
MAFB-063	6/10/11	3.5J
MAFB-102	5/31/11	0.5F
MAFB-104	**5/9/12**	**12**
MAFB-180	**5/17/11**	**55**
MAFB-181	**11/26/12**	**24**
MAFB-235	6/2/11	1.2
MAFB-240	**5/24/11**	**6**
MAFB-242	**6/2/11**	**27**
MAFB-243	5/30/12	2.1
MAFB-250	6/9/11	0.3JF
MAFB-290	5/17/11	<0.1
MAFB-291	5/17/11	<0.1
MAFB-292	5/19/11	<0.1
MAFB-293	5/19/11	<0.1
MAFB-296	**5/17/11**	**6.9**
MAFB-314	**5/19/11**	**74**
MAFB-318	11/8/12	4.4
MAFB-319	5/12/11	0.3F
MAFB-320	**5/20/11**	**23**
MAFB-321	5/12/11	<0.1
MAFB-326	11/29/12	0.089J
MAFB-327	11/27/12	0.14J
MAFB-328	11/29/12	0.18J
MAFB-329	5/17/11	<0.1
MAFB-332	5/12/11	1.8
MAFB-336	5/12/11	<0.05
MAFB-337	11/29/12	<0.05
MAFB-338	11/29/12	0.11J
MAFB-352D	5/17/11	<0.1
MAFB-357D	5/13/11	1.2
MAFB-357Dd	5/13/11	<0.1

LOCATION	DATE	PCE
MAFB-357Ds	5/13/11	<0.1
MAFB-358D	**5/20/11**	**6.3**
MAFB-364D	5/23/11	<0.1
MAFB-365D	6/20/11	<0.1
MAFB-366D	**5/16/11**	**24**
MAFB-368D	6/16/11	2.1
MAFB-375	6/20/11	0.8
MAFB-376	**6/1/11**	**15**
MAFB-377	12/18/12	2.2
MAFB-378D	11/30/12	<0.1
MAFB-379D	5/17/11	3.4
MAFB-380D	6/1/11	<0.1
MAFB-381D	5/10/11	<0.1
MAFB-397	11/30/12	<0.1
MAFB-430	5/10/12	1.9
MAFB-435	**11/30/12**	**10**
MAFB-437Dd	5/19/11	<0.1
MAFB-437Ds	5/19/11	1.5
MAFB-441	5/18/11	<0.1
MAFB-442	6/2/11	<0.1
MAFB-443	5/9/11	<0.1
MAFB-459D	5/10/11	<0.1
MAFB-463D	**11/26/12**	**17**
MAFB-463Dd	11/26/12	<0.1

LOCATION	DATE	PCE
MBS EW-1D	**6/6/11**	**37**
MBS EW-2D	**5/23/11**	**23**
MBS EW-3D	**6/6/11**	**51**
MBS EW-4D	**6/6/11**	**24**
MBS EW-5D	6/20/11	5
MBS EW-6D	6/6/11	2.8
MBS PZ-13	6/14/11	0.1F
MBS PZ-50S	**6/8/11**	**63**
MBS PZ-51	**5/20/11**	**34**
MBS PZ-52	6/8/11	3.8
MBS PZ-53	6/8/11	<0.1
MBS PZ-54	**5/19/11**	**5.8**

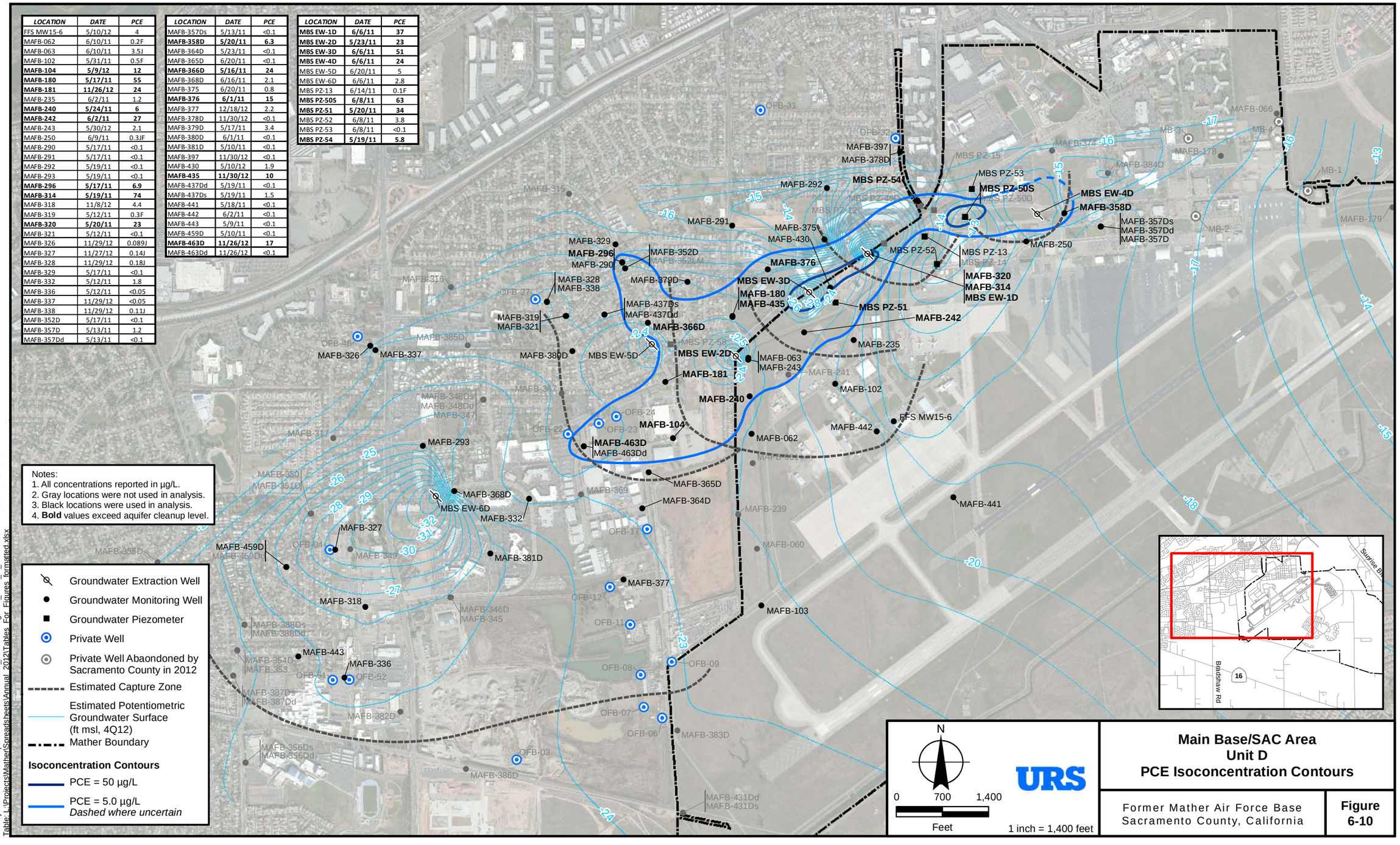


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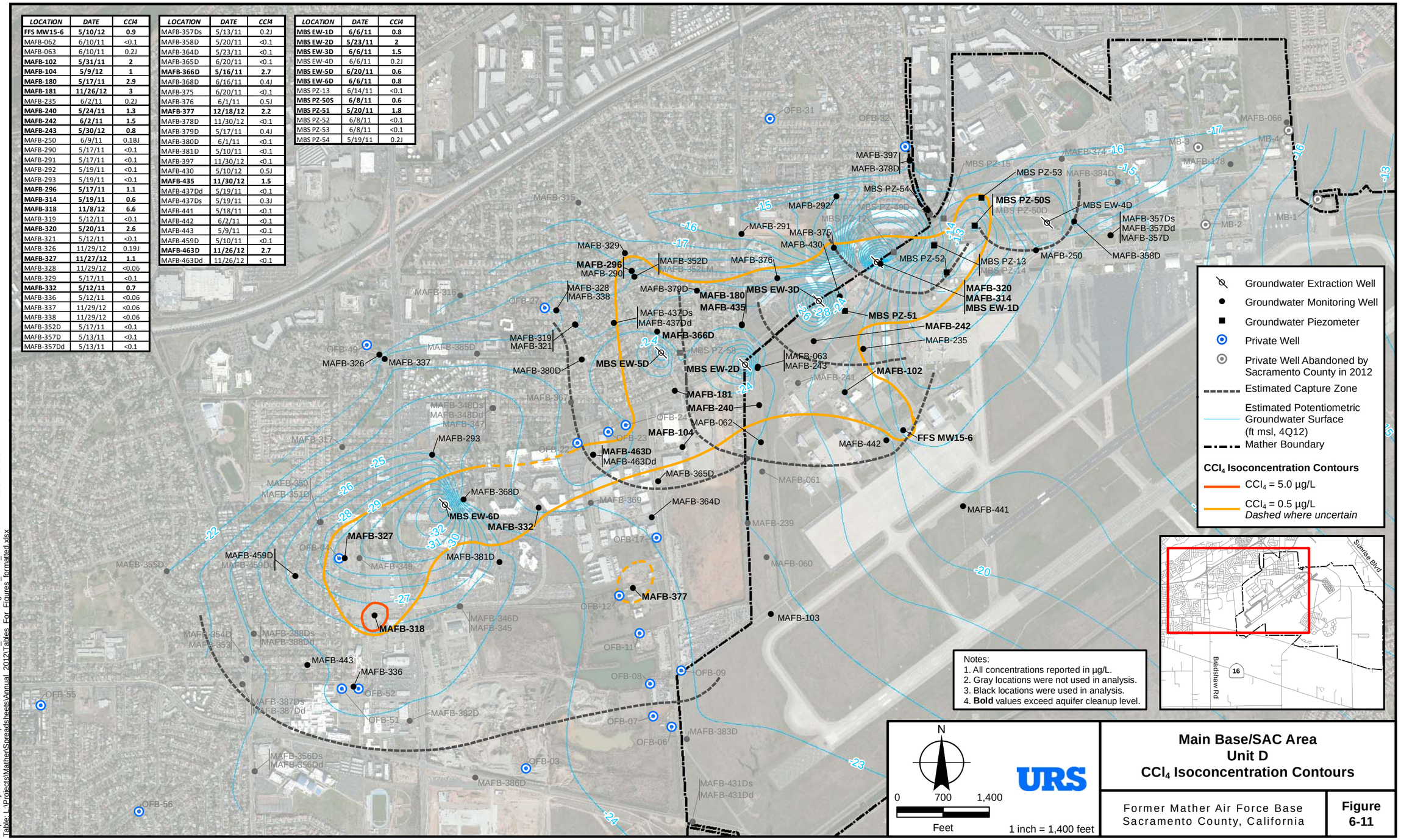
Table: L:\Projects\Mather\Spreadsheets\Annual_2012\Tables_For_Figures_formatted.xlsx

LOCATION	DATE	CCl4
FFS MW15-6	**5/10/12**	**0.9**
MAFB-062	6/10/11	<0.1
MAFB-063	6/10/11	0.2J
MAFB-102	**5/31/11**	**2**
MAFB-104	**5/9/12**	**1**
MAFB-180	**5/17/11**	**2.9**
MAFB-181	**11/26/12**	**3**
MAFB-235	6/2/11	0.2J
MAFB-240	**5/24/11**	**1.3**
MAFB-242	**6/2/11**	**1.5**
MAFB-243	**5/30/12**	**0.8**
MAFB-250	6/9/11	0.1BJ
MAFB-290	5/17/11	<0.1
MAFB-291	5/17/11	<0.1
MAFB-292	5/19/11	<0.1
MAFB-293	5/19/11	<0.1
MAFB-296	**5/17/11**	**1.1**
MAFB-314	**5/19/11**	**0.6**
MAFB-318	**11/8/12**	**6.6**
MAFB-319	5/12/11	<0.1
MAFB-320	**5/20/11**	**2.6**
MAFB-321	5/12/11	<0.1
MAFB-326	11/29/12	0.19J
MAFB-327	**11/27/12**	**1.1**
MAFB-328	11/29/12	<0.06
MAFB-329	5/17/11	<0.1
MAFB-332	**5/12/11**	**0.7**
MAFB-336	5/12/11	<0.06
MAFB-337	11/29/12	<0.06
MAFB-338	11/29/12	<0.06
MAFB-352D	5/17/11	<0.1
MAFB-357D	5/13/11	<0.1
MAFB-357Dd	5/13/11	<0.1

LOCATION	DATE	CCl4
MAFB-357Ds	5/13/11	0.2J
MAFB-358D	5/20/11	<0.1
MAFB-364D	5/23/11	<0.1
MAFB-365D	6/20/11	<0.1
MAFB-366D	**5/16/11**	**2.7**
MAFB-368D	6/16/11	0.4J
MAFB-375	6/20/11	<0.1
MAFB-376	6/1/11	0.5J
MAFB-377	**12/18/12**	**2.2**
MAFB-378D	11/30/12	<0.1
MAFB-379D	5/17/11	0.4J
MAFB-380D	6/1/11	<0.1
MAFB-381D	5/10/11	<0.1
MAFB-397	11/30/12	<0.1
MAFB-430	5/10/12	0.5J
MAFB-435	**11/30/12**	**1.5**
MAFB-437Dd	5/19/11	<0.1
MAFB-437Ds	5/19/11	0.3J
MAFB-441	5/18/11	<0.1
MAFB-442	6/2/11	<0.1
MAFB-443	5/9/11	<0.1
MAFB-459D	5/10/11	<0.1
MAFB-463D	**11/26/12**	**2.7**
MAFB-463Dd	11/26/12	<0.1

LOCATION	DATE	CCl4
MBS EW-1D	**6/6/11**	**0.8**
MBS EW-2D	**5/23/11**	**2**
MBS EW-3D	**6/6/11**	**1.5**
MBS EW-4D	6/6/11	0.2J
MBS EW-5D	**6/20/11**	**0.6**
MBS EW-6D	**6/6/11**	**0.8**
MBS PZ-13	6/14/11	<0.1
MBS PZ-50S	**6/8/11**	**0.6**
MBS PZ-51	**5/20/11**	**1.8**
MBS PZ-52	6/8/11	<0.1
MBS PZ-53	6/8/11	<0.1
MBS PZ-54	5/19/11	0.2J

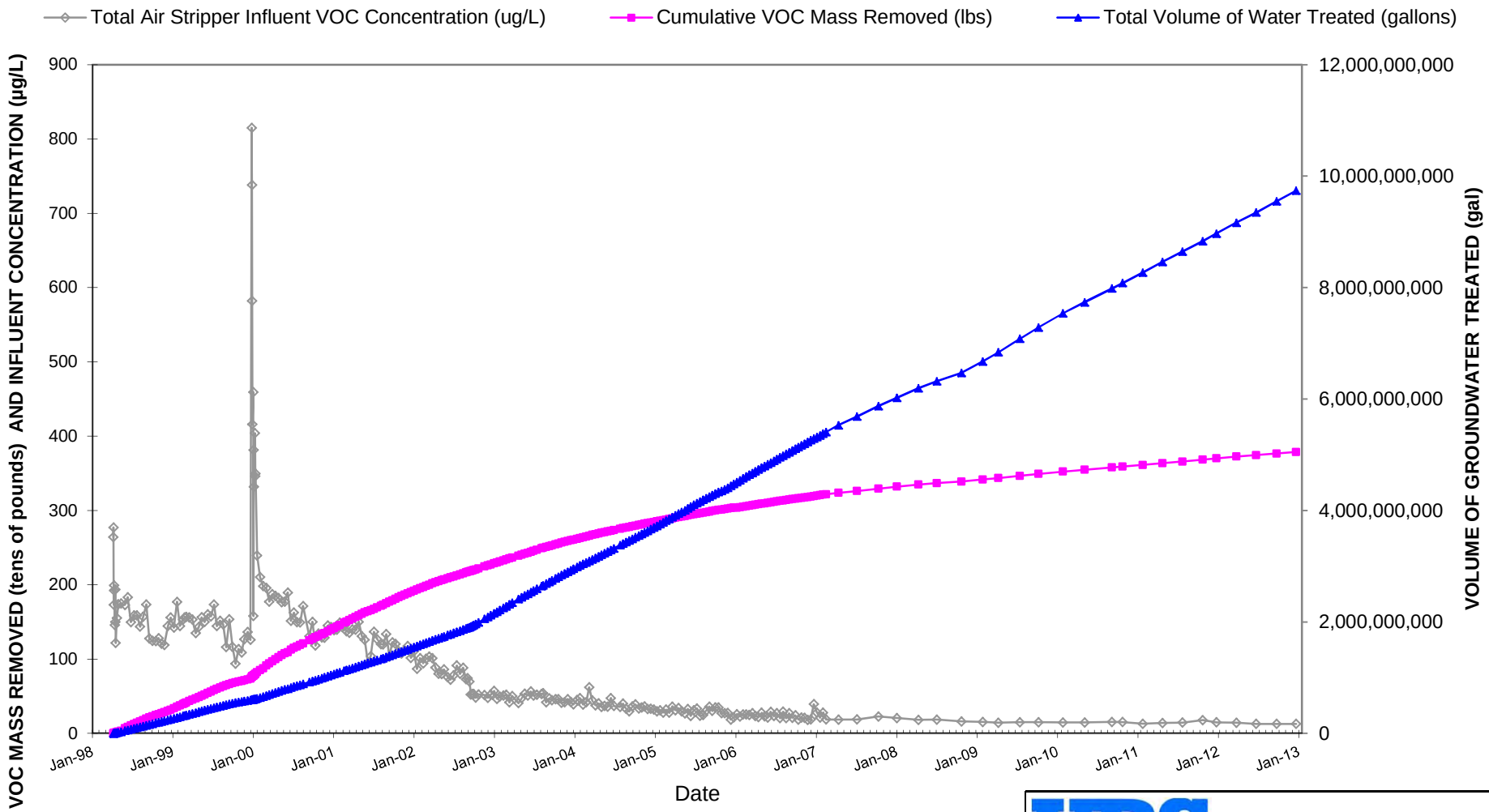


Main Base/SAC Area
Unit D
CCl_4 Isoconcentration Contours

Former Mather Air Force Base
Sacramento County, California

Figure 6-11

Map: L:\Projects\Mather\ArcMaps\Annuals\Groundwater_2012\ITR\Fig6-11_MBS_CCL4.mxd AMN 05.07.2013 SAC
Table: L:\Projects\Mather\Spreadsheets\Annual_2012\Tables_For_Figures_formatted.xlsx

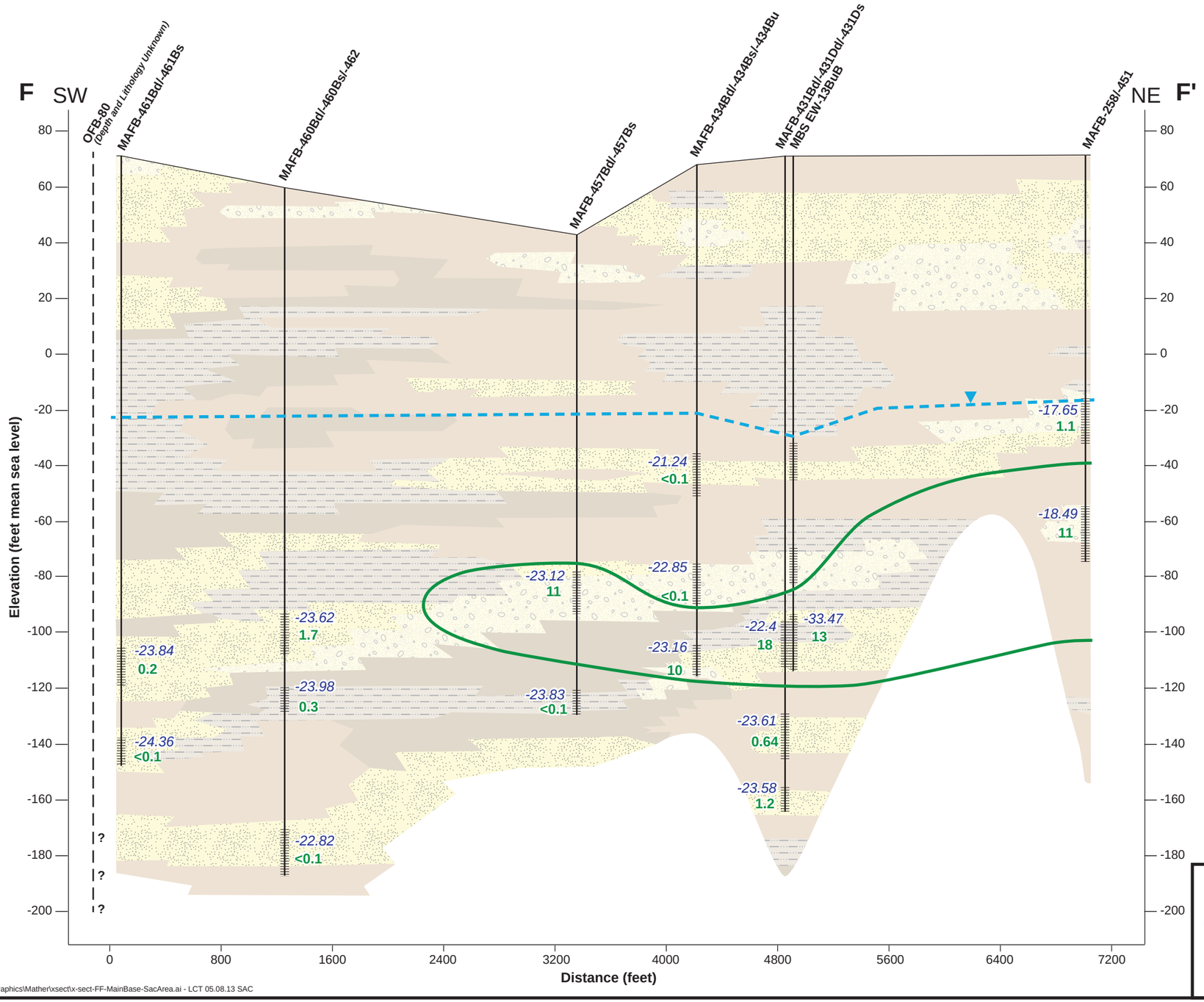


Annual and Fourth Quarter 2012
Mather Groundwater Monitoring Report

URS

MATHER AIR FORCE BASE
SACRAMENTO COUNTY, CALIFORNIA

MAIN BASE/SAC AREA TREATMENT SYSTEM CUMULATIVE VOLATILE ORGANIC COC MASS REMOVED, INFLUENT CONCENTRATION AND VOLUME OF GROUNDWATER TREATED
FIGURE 6-12



Legend

- Gravel
- Sand
- Silty-Sand
- Silt
- Clay

29.66 Groundwater Elevation (4Q12) (ft msl)

Estimated Potentiometric Groundwater Surface (4Q12)(B Unit)

Well

Well Screen

Analytical Data Results (µg/L):

33 TCE

(Analytical data results from 2011 and 2012 unless otherwise indicated.)

TCE Isoconcentration Contour (5.0 µg/L)

0 800

Horizontal Scale:
1″ = 800'
Vertical Scale:
1″ = 40'

Notes:

- Modified from *Annual and Fourth Quarter 2008 Mather Groundwater Monitoring Report* (MWH, 2009a).
- Cross-section plan view shown on Figure 6-6.

URS

Hydrogeologic Cross-Section F-F'
Main Base/SAC Area
Area 1

Former Mather Air Force Base
Sacramento County, California

Figure 6-13

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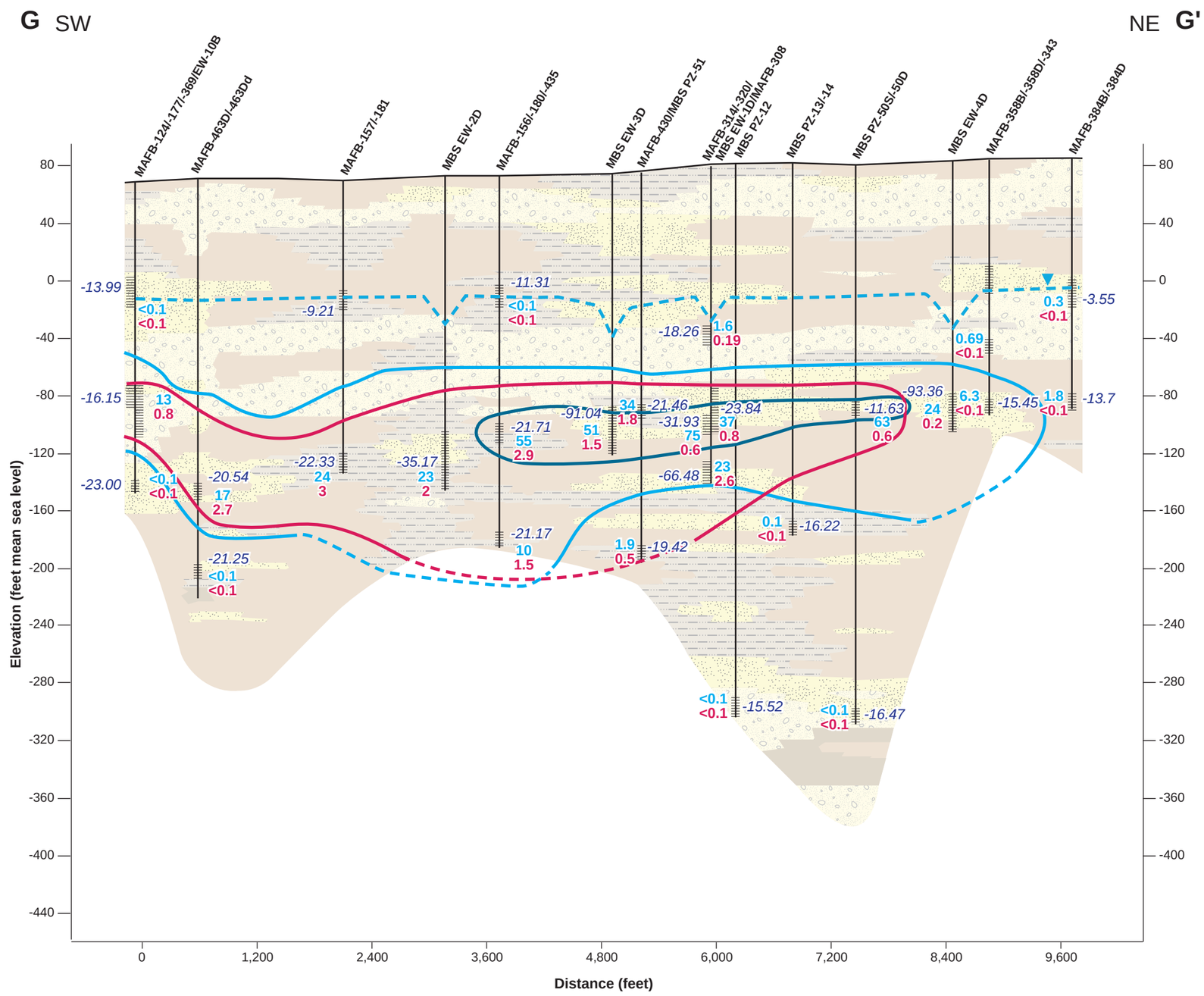

Legend

- Gravel
- Sand
- Silty-Sand
- Silt
- Clay

29.66 Groundwater Elevation (4Q12) (ft msl)

Estimated Watertable Potentiometric Surface (4Q12)

Well

Well Screen

Analytical Data Results (µg/L):

33 PCE
38 CCl_4

(Analytical data results from 2011 and 2012 unless otherwise indicated.)

PCE Isoconcentration Contour (5.0 µg/L)

PCE Isoconcentration Contour (50 µg/L)

CCl_4 Isoconcentration Contour (0.5 µg/L)

0 1200

Horizontal Scale:
1″ = 1200'
Vertical Scale:
1″ = 80'

Notes:

- Modified from *Annual and Fourth Quarter 2008 Mather Groundwater Monitoring Report* (MWH, 2009a).
- Cross-section plan view shown on Figure 6-6.

URS

Hydrogeologic Cross-Section G-G'
Main Base/SAC Area
Southwest Lobe

Former Mather Air Force Base
Sacramento County, California

Figure 6-14

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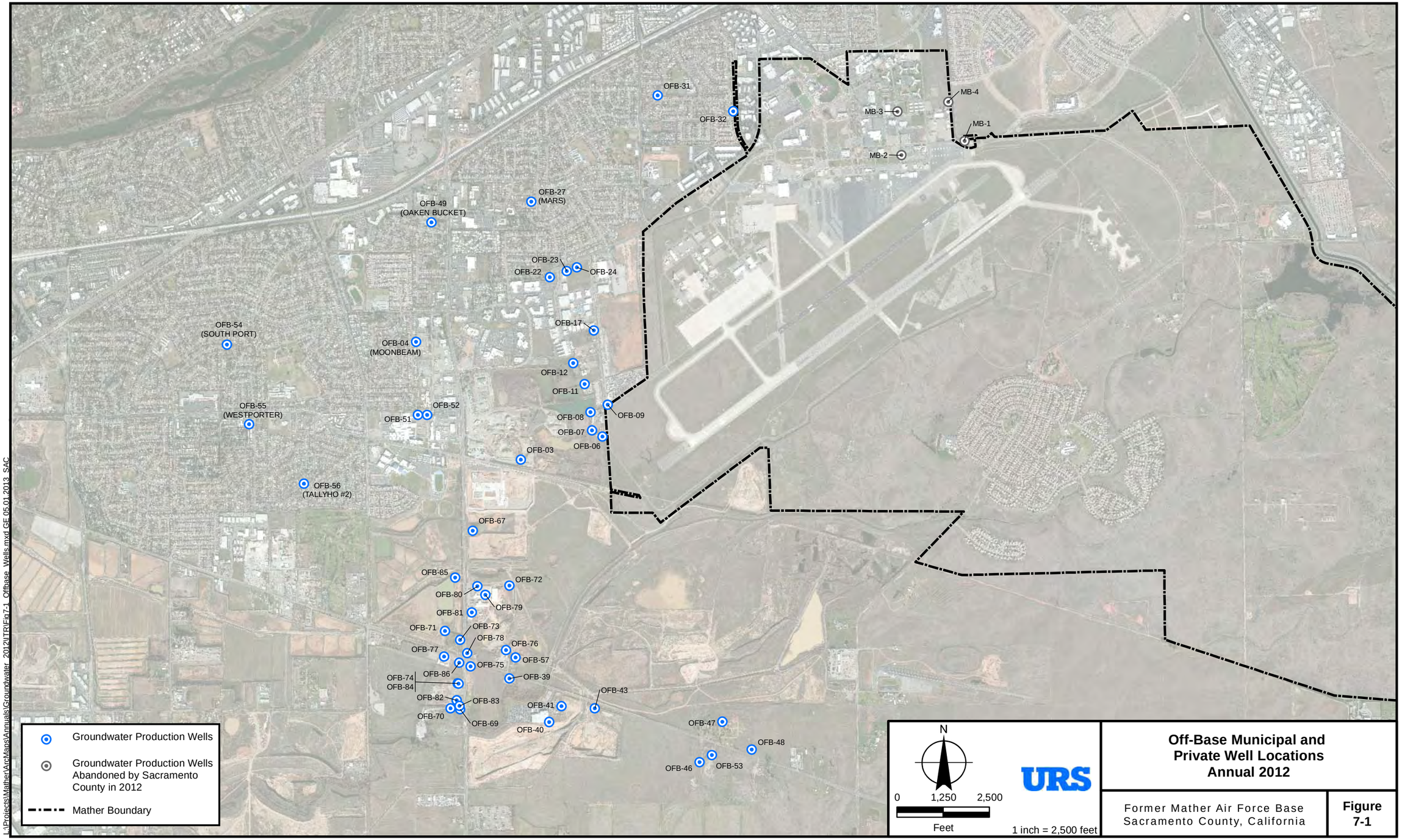

Off-Base Municipal and Private Well Locations Annual 2012

Former Mather Air Force Base
Sacramento County, California

Figure 7-1

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