Supplemental Material for:
Evaluation of predicted Medfly (*Ceratitis capitata*) quarantine length in the United States utilizing degree-day and agent-based models

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"Supernorm" figures

Daily normal of hourly temperatures

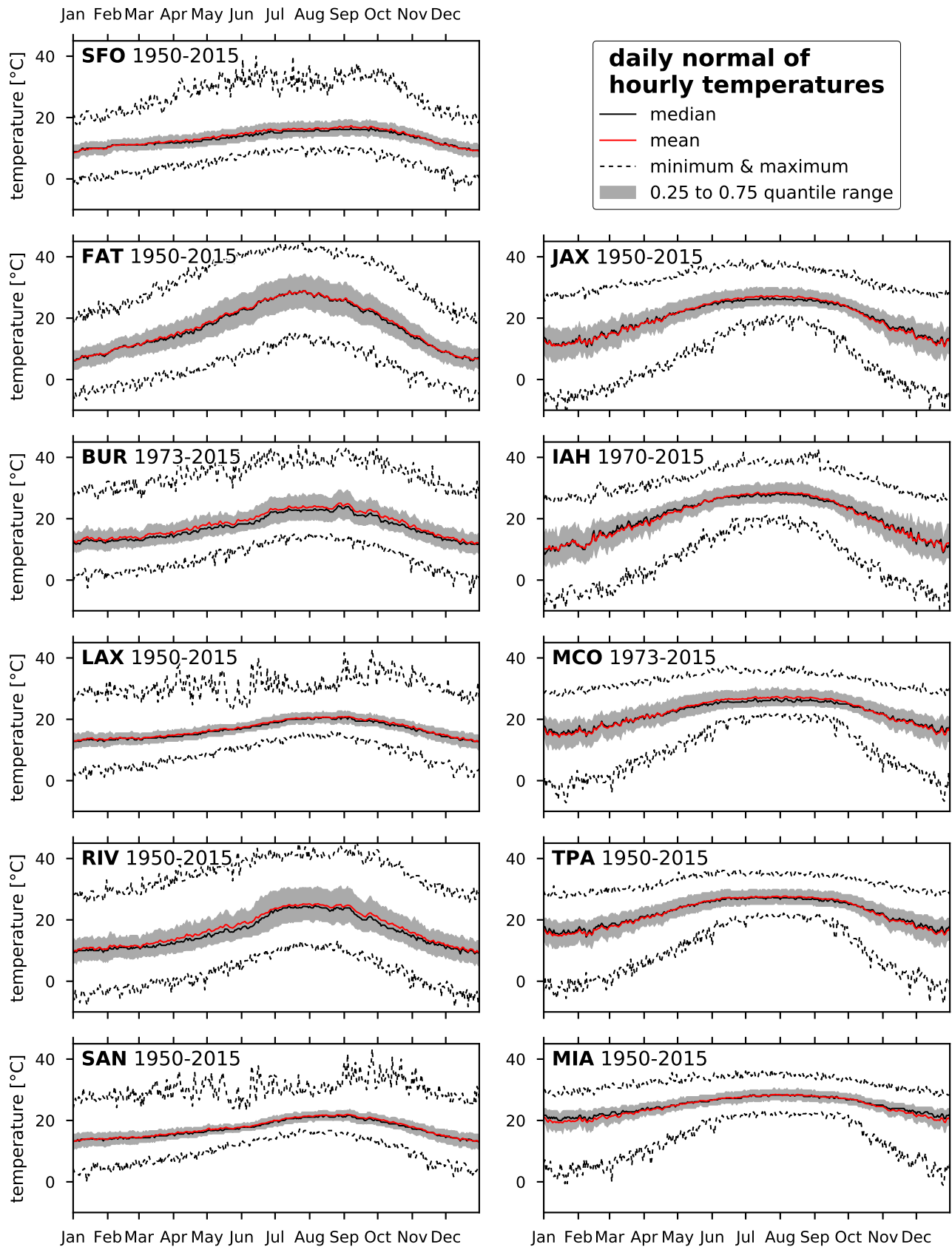**Figure 1.** Hourly temperature data aggregated by day of year.
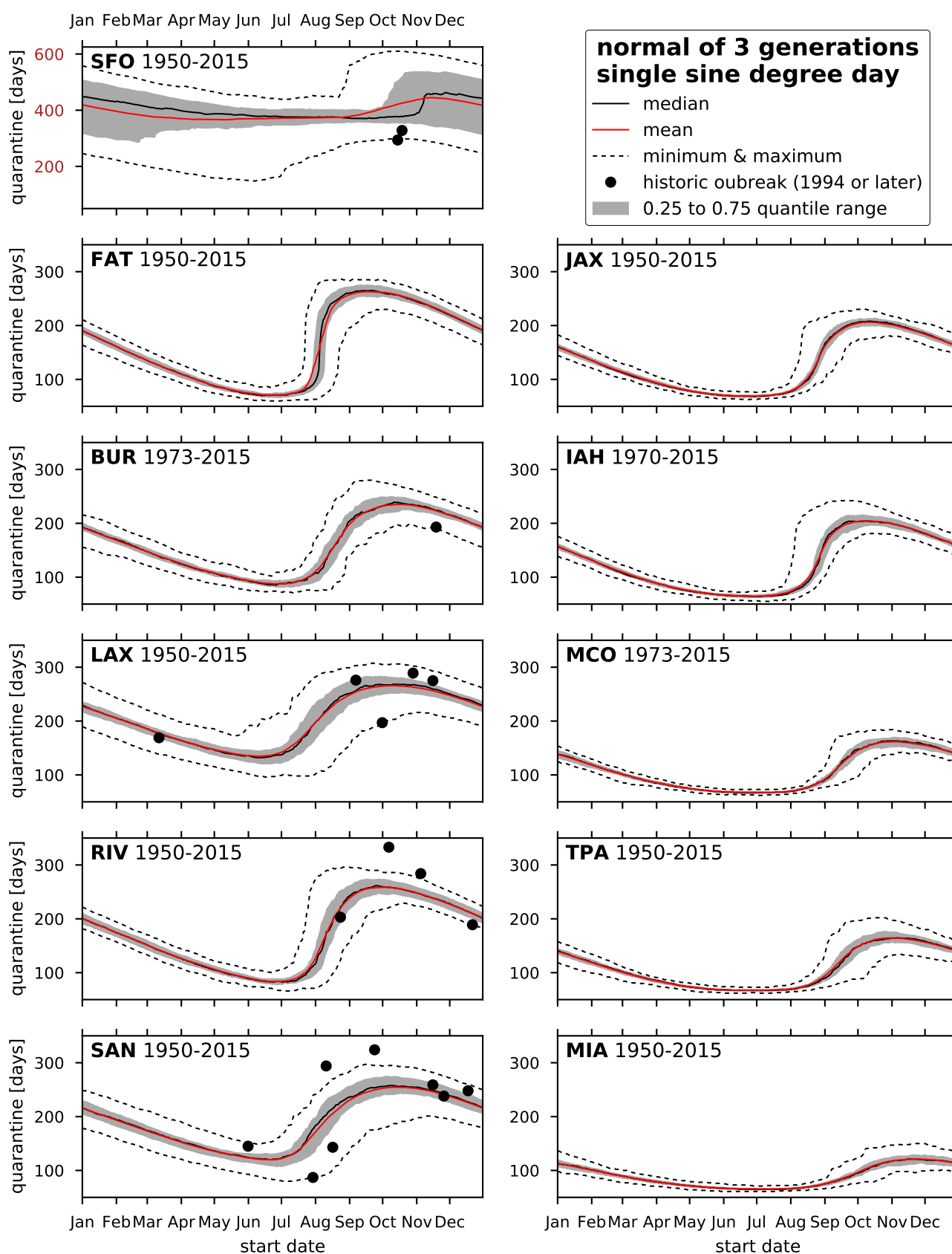
Degree day based PQL supernorm

Figure 2. Single sine degree day based predicted quarantine lengths aggregated by day of year.
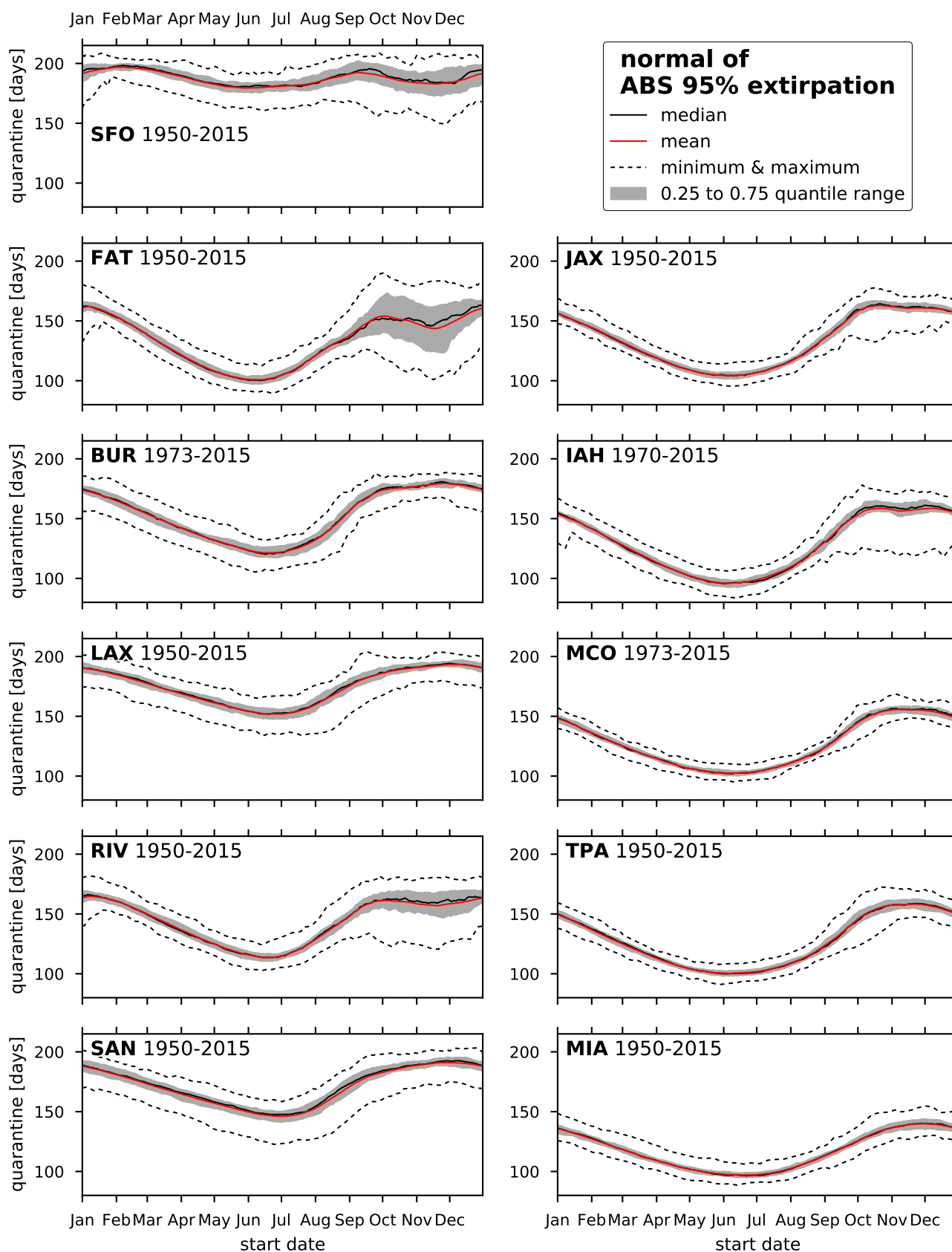
MED-FOES PQL based supernorm

Figure 3. MED-FOES based predicted quarantine lengths aggregated by day of year.

Difference in PQL at nearby sites (LA basin example)
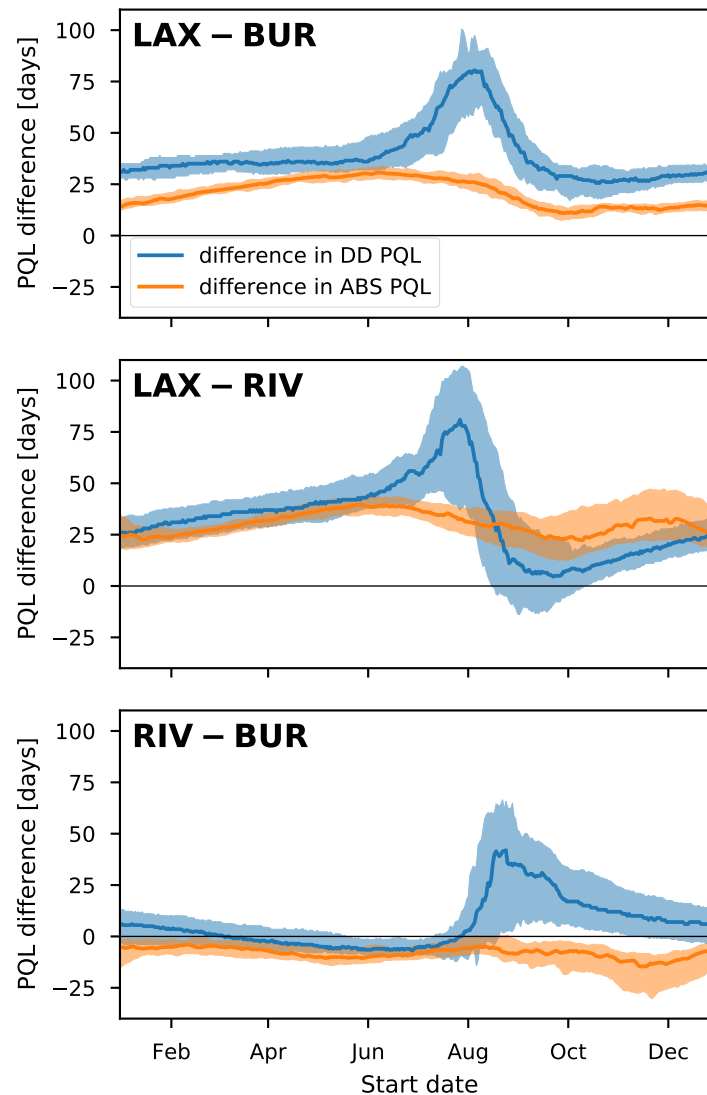
Figure 4. The difference in PQL values for the same start date (including year) between sites in the LA basin. For each date over the range of available data (1973 through 2015 for LAX-BUR and RIV-BUR, 1950 through 2015 for LAX-RIV), PQL values for each site are computed and the differences taken. The resulting differences are then aggregated by day-of-year. Lines show the median while the shaded region is the 25% to 75% quantile range for each day-of-year aggregation of differences.

Historical quarantines

Table 1. Historical quarantines in California.

Year	City	County	Site	Start Date	End Date	Area [mi²]	duration [days]	day-of-year	DD PQL [days]	mean normal DD PQL	ABS PQL [days]	mean normal ABS PQL
1975-1976	Venice	Los Angeles	KLAX	1975-11-14	1976-08-02	100	262	2011-11-14	248	257	192	192
1980	Northridge	Los Angeles	KBUR	1980-07-15	1980-12-18	100	156	2011-07-15	84	91	123	125
1980-1982	Santa Clara	Santa Clara	KSFO	1980-07-15	1982-09-21	3971	798	2011-07-15	365	372	190	182
1987-1988	East LA/Maywood	Los Angeles	KLAX	1987-08-21	1988-02-05	110	168	2011-08-21	218	235	172	170
1988	Northridge	Los Angeles	KBUR	1988-07-27	1988-11-15	62	111	2011-07-27	113	102	139	130
1988-1989	West Los Angeles	Los Angeles	KLAX	1988-10-07	1989-06-12	76	248	2011-10-07	266	266	191	188
1989-1990	Elysia Park	Los Angeles	KBUR	1989-08-10	1990-11-09	1362	456	2011-08-10	117	133	138	138
1989-1990	Mountain View	Santa Clara	KSFO	1989-09-11	1990-09-14	60	368	2011-09-11	359	385	190	192
1991-1996	Los Angeles	Los Angeles	KLAX	1991-10-16	1996-06-15	1576	1704	2011-10-16	231	265	184	189
1992-1993	San Jose	Santa Clara	KSFO	1992-08-04	1993-10-14	62	436	2011-08-04	326	373	179	185
1992	Oceanside	San Diego	KSAN	1992-07-04	1992-12-15	30	164	2011-07-04	103	124	139	146
1994-1995	Camarillo	Ventura	KBUR	1994-10-06	1995-08-15	86	313	2011-10-06	261	234	177	175
1997-1998	Walnut Park	Los Angeles	KLAX	1997-10-01	1998-04-16	69	197	2011-10-01	279	265	184	186
1998-1999	Lake Forest	Orange	KLAX	1998-08-06	1999-08-27	63	386	2011-08-06	227	208	161	162
1998-1999	LaJolla	San Diego	KSAN	1998-08-11	1999-06-01	30	294	2011-08-11	231	195	165	158
1998-1999	Lake Elsinore	Riverside	KRIV	1998-11-05	1999-08-16	180	284	2011-11-05	252	246	153	158
2001-2002	Hyde Park	Los Angeles	KLAX	2001-09-07	2002-06-10	53	276	2011-09-07	285	255	188	179
2005-2006	Rancho Cucamonga	San Bernardino	KRIV	2005-10-07	2006-09-05	204	333	2011-10-07	249	258	163	161
2005-2006	San Jose	Santa Clara	KSFO	2005-10-19	2006-09-12	77	328	2011-10-19	370	425	201	185
2007-2008	Dixon	Solano	KFAT	2007-09-17	2008-08-08	114	326	2011-09-17	267	263	165	148
2007-2008	San Jose	Santa Clara	KSFO	2007-10-15	2008-08-04	75	294	2011-10-15	376	422	184	186
2007-2008	Rolling Hills	Los Angeles	KLAX	2007-10-29	2008-08-13	97	289	2011-10-29	258	263	190	190
2008-2009	El Cajon	San Diego	KSAN	2008-11-26	2009-07-22	107	238	2011-11-26	239	240	189	191
2008-2009	Spring Valley	San Diego	KSAN	2008-12-18	2009-08-23	93	248	2011-12-18	224	226	187	190
2009	Mira Mesa	San Diego	KSAN	2009-06-01	2009-10-24	106	145	2011-06-01	119	123	148	150
2009-2010	Imperial Beach	San Diego	KSAN	2009-08-17	2010-01-07	37	143	2011-08-17	218	206	161	162
2009-2010	Escondido	San Diego	KSAN	2009-09-24	2010-08-14	198	324	2011-09-24	274	250	185	181
2009-2010	Fallbrook	San Diego	KSAN	2009-11-16	2010-08-02	79	259	2011-11-16	273	246	194	191
2009-2010	Santa Monica	Los Angeles	KLAX	2009-11-16	2010-08-18	65	275	2011-11-16	278	256	193	192
2012-2013	Rancho Cucamonga	San Bernardino	KRIV	2012-08-24	2013-03-15	88	203	2011-08-24	203	220	131	143
2014	Los Angeles	Los Angeles	KLAX	2014-03-12	2014-08-28	88	169	2011-03-12	149	177	163	174
2014-2015	Perris	Riverside	KRIV	2014-12-22	2015-06-29	83	189	2011-12-22	193	210	164	162
2015-2016	La Mesa	San Diego	KSAN	2015-07-30	2015-10-25	93	87	2011-07-30	89	167	129	152
2016-2017	Arleta	Los Angeles	KBUR	2016-11-19	2017-05-31	127	193	2011-11-19	220	223	158	179