

### Development of Projection Data for Military Installations

Since REMI data did not exist for military installations it was necessary to use projection data from another source. In order to determine the best data to be used when projecting the 2008 actual annual point source emissions, a phone call was placed to the Utah Governor's Office of Management and Budget (GOMB). In a phone conversation with Peter Donner of the GOMB on 4/27/2011, he indicated that current employment data from the Bureau of Economic Analysis (BEA) was considered to be better than current GOMB employment data. The reason for this is that the BEA has taken into account the economic downturn that occurred in late 2008 while the current GOMB employment data had not yet been revised to take this into account. As of 4/27/2011 the BEA employment data included years up to and through 2009. However, data for 2014, 2017 and 2019 was also necessary for performing projections. Peter Donner indicated that GOMB still considered the GOMB projection data from 2020 forward to be good data. Therefore it was determined that DAQ would use BEA employment data up to 2009 and then GOMB employment data from 2020 forward. In order to develop data for the years between 2009 and 2020 it was agreed that a straight line analysis would be the best method. Therefore, data for the years between 2009 and 2020 were determined by performing a straight line analysis between the two sets of data.

## Employment by Area and Industry

Sources: Regional Economic Models, Inc. (REMI) Data

\*Bureau of Economic Analysis (BEA) and Governors Office of Management & Budget (GOMB) Data

FIPS Code	County	NAICS Category	Industry Description	Data Origin	2008	2010	2014	2017	2019
3	Box Elder	5	Manufacturing	REMI Data (Billions of Fixed (2005) Dollars)	2.617	2.600	3.167	3.468	3.712
3	Box Elder	22	Federal Military	*BEA and GOMB (Employees)	213	222	227	230	233
5	Cache	5	Manufacturing	REMI Data (Billions of Fixed (2005) Dollars)	2.558	2.801	3.457	3.993	4.378
7	Carbon	3	Utilities	REMI Data (Billions of Fixed (2005) Dollars)	0.095	0.090	0.086	0.087	0.088
11	Davis	3	Utilities	REMI Data (Billions of Fixed (2005) Dollars)	0.087	0.089	0.084	0.080	0.079
11	Davis	5	Manufacturing	REMI Data (Billions of Fixed (2005) Dollars)	2.610	2.632	3.114	3.302	3.459
11	Davis	14	Administrative & Waste Services	REMI Data (Billions of Fixed (2005) Dollars)	0.352	0.401	0.491	0.546	0.587
11	Davis	22	Federal Military	*BEA and GOMB (Employees)	5462	5580	6044	6391	6623
13	Duchesne	2	Mining	REMI Data (Billions of Fixed (2005) Dollars)	0.523	0.447	0.542	0.565	0.580
15	Emery	3	Utilities	REMI Data (Billions of Fixed (2005) Dollars)	0.169	0.172	0.163	0.167	0.171
23	Juab	3	Utilities	REMI Data (Billions of Fixed (2005) Dollars)	0.048	0.049	0.051	0.060	0.066
27	Millard	2	Mining	REMI Data (Billions of Fixed (2005) Dollars)	0.025	0.049	0.060	0.059	0.060
27	Millard	3	Utilities	REMI Data (Billions of Fixed (2005) Dollars)	0.266	0.187	0.177	0.180	0.184
27	Millard	5	Manufacturing	REMI Data (Billions of Fixed (2005) Dollars)	0.049	0.036	0.044	0.050	0.055
29	Morgan	5	Manufacturing	REMI Data (Billions of Fixed (2005) Dollars)	0.060	0.062	0.078	0.089	0.097
35	Salt Lake	2	Mining	REMI Data (Billions of Fixed (2005) Dollars)	0.984	0.948	1.151	1.162	1.175
35	Salt Lake	3	Utilities	REMI Data (Billions of Fixed (2005) Dollars)	1.028	0.985	0.960	0.961	0.970
35	Salt Lake	5	Manufacturing	REMI Data (Billions of Fixed (2005) Dollars)	15.452	16.739	20.576	22.932	24.653
35	Salt Lake	15	Educational Services	REMI Data (Billions of Fixed (2005) Dollars)	0.582	0.622	0.606	0.599	0.608
43	Summit	5	Manufacturing	REMI Data (Billions of Fixed (2005) Dollars)	0.168	0.201	0.247	0.286	0.312
45	Tooele	5	Manufacturing	REMI Data (Billions of Fixed (2005) Dollars)	0.433	0.459	0.574	0.652	0.712
45	Tooele	14	Administrative & Waste Services	REMI Data (Billions of Fixed (2005) Dollars)	0.187	0.237	0.309	0.376	0.424
45	Tooele	22	Federal Military	*BEA and GOMB (Employees)	273	289	299	307	312
49	Utah	3	Utilities	REMI Data (Billions of Fixed (2005) Dollars)	0.179	0.172	0.172	0.179	0.184
49	Utah	5	Manufacturing	REMI Data (Billions of Fixed (2005) Dollars)	4.963	4.965	6.039	6.881	7.471
49	Utah	15	Educational Services	REMI Data (Billions of Fixed (2005) Dollars)	0.799	0.802	0.779	0.770	0.781
51	Wasatch	3	Utilities	REMI Data (Billions of Fixed (2005) Dollars)	0.012	0.010	0.010	0.010	0.010
57	Weber	5	Manufacturing	REMI Data (Billions of Fixed (2005) Dollars)	3.398	3.520	4.207	4.567	4.856

\*See 'Development of Projection Data for Military Installations' in this Appendix for a detailed description of how this data was developed.

### Sites that Requested the Use of Site Specific Projection Numbers

FIPS Code	County	Site Name	Site ID		2008	2014	2017	2019
3	Box Elder	ATK Thiokol	10009	All Pollutants (%)	1.00	1.05	1.08	1.10
49	Utah	BYU	10790	All Pollutants (%)	1.00	1.09	1.14	1.17
3	Box Elder	* Nucor Steel	10008	All Pollutants (%)	1.30	1.30	1.40	1.50
3	Box Elder	Vulcraft	10028	All Pollutants (%)	1.00	1.00	1.20	1.30
3	Box Elder	Vulcraft - Nucor Building Systems	10028	All Pollutants (%)	1.00	1.35	1.61	1.81
35	Salt Lake	** Hexcel Corporation	11386	PM10 (tons/yr)	79.16	79.16	80.54	81.46
				PM2.5 (tons/yr)	49.04	49.04	49.82	50.34
				SOx (tons/yr)	17.32	17.32	32.71	42.97
				NOx (tons/yr)	69.61	69.61	103.69	126.41
				VOC (tons/yr)	88.13	88.13	93.8	97.58
				*** Benzene, Chlorine, CO, HCl, NH <sub>3</sub> (tons/yr)	60.65	60.65	72.11	79.75

\* Projection data for Nucor Steel for 2008 was set equal to 2014 (therefore no growth) since the growth was included during the True-Up phase.

\*\* Projection data for Hexcel Corporation for 2008 was set equal to 2014 (therefore no growth) since the growth was included in the production lines added during the True-Up phase.

\*\*\* Data was not supplied for these pollutants. Therefore an average growth of the other pollutants at this site was calculated and used.