DATA SOURCES

The sources of the data are third-party organizations that have a direct interest in measuring, calculating, or supplying such data to the DAQ or to the general public. The category section gives the resources where the data was obtained. It also summarizes the calculation method to project a trend line in those cases where the sources themselves did not supply DAQ with their own annual values.

TABLE 1: UTAH HUMAN POPULATION

Historic and Projection Data from outside sources (not UDAQ):

1995-2008: Data is supplied by Governor's Office of Planning & Budget; State of Utah Economic and Demographic Research Database, Utah Population Estimates Committee, "Total Population by County: 1940 - 2009." (Appendix 1)

2009 - 2050: Data is supplied by Governor's Office of Planning & Budget, "2008 Baseline Projections." (Appendix 2)

TABLE 2: UTAH HUMAN POPULATION PERCENT OF GROWTH

1995-2050: Percentage of growth is calculated using Table 1.

TABLE 3: U.S.A. HUMAN POPULATION

Historic and Projection Data from outside sources (not UDAQ):

2000-2009: Data is supplied by the U.S. Dept. of Census, "Table 1: Annual Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico: April 1, 2000 to July 1, 2009." (Appendix 3)

2010 - 2050: Data is supplied by the U.S. Dept. of Census, "Table 1: Projections of the Population and Components of Change for the United States: 2010-2050." Appendix 4)

TABLE 4: AGRICULTURAL EMPLOYMENT (jobs)

Historic and Projection Data from outside sources (not UDAQ):

2001 - 2009: Data is supplied by Regional Economic Information System, Bureau of Economic Analysis, "Employment by Industry." (Appendix 5)

2020 - 2050: Data is supplied by Utah Governor's Office of Planning & Budget, "Employment by Area and Industry Detailed Industries," see internet site www.governor.state.ut.us/projections/Tables/tables.html. (Appendix 6)

UDAQ's Projection Calculations:

2010-2019: Per instructions from the Bureau of Economic Analysis, interpolation was used between 2009 and 2020. (2.b iii Appendix 1)

TABLE 5: AGRICULTURAL EMPLOYMENT PERCENT GROWTH

1995-2050: Percentage of growth is calculated using Table 4.

TABLE 6: MANUFACTURING EMPLOYMENT (jobs)

2001 - 2009: Data is supplied by Regional Economic Information System, Bureau of Economic Analysis, " Employment by Industry." (Appendix 5) Interpolation was used for missing data (2001-2009). "Employment by Area and Industry Detailed Industries" was used where interpolation was not considered reasonable.

2020 - 2050: Data is supplied by Utah Governor's Office of Planning & Budget, "Employment by Area and Industry Detailed Industries," see internet site www.governor.state.ut.us/projections/Tables/tables.html. (Appendix 6)

UDAQ's Projection Calculations:

2010-2019: Per instructions from the Bureau of Economic Analysis, interpolation was used between 2009 and 2020. (2.b iii Appendix 1)

TABLE 7: MANUFACTURING EMPLOYMENT GROWTH RATE

1995-2050: Percentage of growth is calculated using Table 6.

TABLE 8: CONSTRUCTION EMPLOYMENT (jobs)

Historic and Projection Data from outside sources (not UDAQ):

2001 - 2009: Data is supplied by Regional Economic Information System, Bureau of Economic Analysis, "Employment by Industry." (Appendix 5) Missing data (2001-2009) was calculated by interpolation.

2020-2050: Data is supplied by Utah Governor's Office of Planning & Budget, "Employment by Area and Industry Detailed Industries," File "Employment by Area and Industry.xls." (Appendix 6)

UDAQ's Projection Calculations:
2010-2019: Per instructions from the Bureau of Economic Analysis, interpolation was used between 2009 and 2020. (2.b iii Appendix 1)

TABLE 9: CONSTRUCTION EMPLOYMENT GROWTH RATES
UDAQ's Calculations:
1995-2050: Percentage of growth is calculated using Table 8.

TABLE 10: TRANSPORTATION EMPLOYMENT (jobs)
Historic and Projection Data from outside sources (not UDAQ):

2001 - 2009: Data is supplied by Regional Economic Information System, Bureau of Economic Analysis, " Employment by Industry." (Appendix 5) Interpolation was used for missing data (2001-2009). "Employment by Area and Industry Detailed Industries" was used where interpolation was not considered reasonable.
2020-2050: Data is supplied by Utah Governor's Office of Planning & Budget, "Employment by Area and Industry Detailed Industries," File "Employment by Area and Industry.xls." (Appendix 6)

UDAQ's Projection Calculations:
2010-2019: Per instructions from the Bureau of Economic Analysis, interpolation was used between 2009 and 2020. (2.b iii Appendix 1)

TABLE 11: TRANSPORTATION EMPLOYMENT GROWTH RATES
UDAQ's Calculations:
1995-2050: Percentage of growth is calculated using Table 10.

TABLE 12: MINING EMPLOYMENT (jobs)
Historic and Projection Data from outside sources (not UDAQ):

2001 - 2009: Data is supplied by Regional Economic Information System, Bureau of Economic Analysis, " Employment by Industry." (Appendix 5) Interpolation was used for missing data (2001-2009). "Employment by Area and Industry Detailed Industries" was used where interpolation was not considered reasonable.
2020-2050: Data is supplied by Utah Governor's Office of Planning & Budget, "Employment by Area and Industry Detailed Industries." File "Employment by Area and Industry.xls." (Appendix 6)

UDAQ's Projection Calculations:
2010-2019: Per instructions from the Bureau of Economic Analysis, interpolation was used between 2009 and 2020. (2.b iii Appendix 1)

TABLE 13: MINING EMPLOYMENT GROWTH RATES
UDAQ's Calculations:
1995-2050: Percentage of growth is calculated using Table 12.

TABLE 14: UTAH DEGREASING EMPLOYEES (331*///*, 332*///*, 333*///*, 334*///*, 335*///*, 336*///*, 337*///*, 339*///*, 441*///*, 483*///*, 484*///*, 485*///*, 488*///*, 8111*//*, 8112*//*)
Historic and Projection Data from outside sources (not UDAQ):
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008 National Emissions Inventory Data & Documentation." (Appendix 7)

UDAQ's Projection Calculations:
2007-2050: grown by population growth.

TABLE 15: UTAH NEW AUTOMOTIVE EMPLOYEES (4411, 4412, 81112)
Historic and Projection Data from outside sources (not UDAQ):
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008 National Emissions Inventory Data & Documentation." (Appendix 7)

UDAQ's Projection Calculations:
2007-2050: grown by population growth.

TABLE 16: METAL FURNITURE (NAICS 3372124, 337214, 337127, 339111, and 337215)
Historic and Projection Data from outside sources (not UDAQ):
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008 National Emissions Inventory Data & Documentation." (Appendix 7)

UDAQ's Projection Calculations:
2007-2050: grown by manufacturing employment growth.

TABLE 17: WOOD FURNITURE MANUFACTURING EMPLOYEES (NAICS 337110, 337121,337122, 337127, 337129, 337211, 337212, 337215, 339111)
Historic and Projection Data from outside sources (not UDAQ):
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008 National Emissions Inventory Data & Documentation." (Appendix 7)

UDAQ's Projection Calculations:
2007-2050: grown by manufacturing employment growth.

TABLE 18: METAL CONTAINERS MANUFACTURING EMPLOYEES (NAICS 33243/)
Historic and Projection Data from outside sources (not UDAQ):
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008 National Emissions Inventory Data & Documentation." (Appendix 7)

UDAQ's Projection Calculations:
2007-2050: grown by manufacturing employment growth.

TABLE 19: MACHINERY AND EQUIPMENT (NAICS 3331//, 3332//, 3333//, AND 33341/)
Historic and Projection Data from outside sources (not UDAQ):
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008 National Emissions Inventory Data & Documentation." (Appendix 7)

UDAQ's Projection Calculations:
2007-2050: grown by manufacturing employment growth.

Table 20: Appliances (NAICS 3352//)
Historic and Projection Data from outside sources (not UDAQ):
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008 National Emissions Inventory Data & Documentation." (Appendix 7)

UDAQ's Projection Calculations:
2007-2050: grown by manufacturing employment growth.

TABLE 21: OTHER TRANSPORTATION EQUIPMENT MANUFACTURING EMPLOYEES (NAICS 3361//, 3362//, AND 3363//)
Historic and Projection Data from outside sources (not UDAQ):
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008 National Emissions Inventory Data & Documentation." (Appendix 7)

UDAQ's Projection Calculations:
2007-2050: grown by manufacturing employment growth.

TABLE 22: SHEET, STRIP, AND COIL MANUFACTURING EMPLOYEES (NAICS 332812, 339911, 339912, AND 339914)

Historic and Projection Data from outside sources (not UDAQ):

2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008 National Emissions Inventory Data & Documentation." (Appendix 7)

UDAQ's Projection Calculations:

2007-2050: grown by manufacturing employment growth.

TABLE 23: FACTORY FINISHED WOOD PRODUCTS MANUFACTURING EMPLOYEES (NAICS 321///)

Historic and Projection Data from outside sources (not UDAQ):

2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008 National Emissions Inventory Data & Documentation." (Appendix 7)

UDAQ's Projection Calculations:

2007-2050: grown by manufacturing employment growth.

TABLE 24: ELECTRICAL MANUFACTURING EMPLOYEES (NAICS 331319, 331422, 331491, 335921, 335929, AND 335311)

Historic and Projection Data from outside sources (not UDAQ):

2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008 National Emissions Inventory Data & Documentation." (Appendix 7)

UDAQ's Projection Calculations:

2007-2050: grown by manufacturing employment growth.

TABLE 25: OTHER PRODUCT COATINGS (NAICS 339/// AND 3369//)

Historic and Projection Data from outside sources (not UDAQ):

2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008 National Emissions Inventory Data & Documentation." (Appendix 7)

UDAQ's Projection Calculations:

2007-2050: grown by manufacturing employment growth.

TABLE 26: MARINE COATINGS (NAICS 3366// AND 488390)

Historic and Projection Data from outside sources (not UDAQ):

2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008 National Emissions Inventory Data & Documentation." (Appendix 7)

UDAQ's Projection Calculations:

2007-2050: grown by manufacturing employment growth.

TABLE 27: PAPER, FILM, AND FOIL (NAICS 322211, 322212, 322219, 3222220, 322221, 322222, 322223, 322225, 322226, 322230, and 322299)

Historic and Projection Data from outside sources (not UDAQ):

2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008 National Emissions Inventory Data & Documentation." (Appendix 7)
"State of Utah Workforce Services" - "Converted Paper" (NAICS 222299) employment, previously unaccounted for, adjusted for companies reporting range of employees. Employment data sourced from State of Utah Workforce Services 2009 C

UDAQ's Projection Calculations:

2007-2050: grown by manufacturing employment growth.

TABLE 28: RAILROAD COATINGS (NAICS 3365//)

2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008 National Emissions Inventory Data & Documentation." (Appendix 7)

UDAQ's Projection Calculations:
2007-2050: grown by manufacturing employment growth.

TABLE 29: AIRCRAFT COATINGS (NAICS 3364//)

2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008 National Emissions Inventory Data & Documentation." (Appendix 7)

UDAQ's Projection Calculations:
2007-2050: grown by manufacturing employment growth.

TABLE 30: GRAPHIC ART EMPLOYMENT (NAICS 322211, 322212, 322213, 322214, 322222, 322223, 322224, 322226, 322231, 322232, 322291, 322299, 32311/)

2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008 National Emissions Inventory Data & Documentation." New EF developed by ERTAC; calculation methods remain unchanged. (Appendix 7)

UDAQ's Projection Calculations:
2007-2050: grown by population growth.

TABLE 31: LAND AREA (km2)

Historic and Projection Data from outside sources (not UDAQ):
UDAQ's Patrick Barickman supplied these values by county. (Appendix 8)

UDAQ's Projection Calculations:
Data is held constant for all years.

TABLE 32: STATEWIDE MEAN AMBIENT AIR TEMPERATURES (degrees Fahrenheit)

Historic and Projection Data from outside sources (not UDAQ):
1995-2007: Data is from the National Weather Service - NWS Salt Lake City, "SLC Annual Mean Temperature," see internet site http://www.wrh.noaa.gov/slc/climate/slcclimate/SLC/fig6c.php. (Appendix 9)

UDAQ's Projection Calculations:
2008-2050: Temperatures are calculated using averaging.

TABLE 33B: SIP TEMPERATURE MAX (Annual)

Historic and Projection Data from outside sources (not UDAQ):
2006, 2007, 2008, and 2009 episode temperature data from Utah State University GIS Climate Search Data base. See http://climate.usurf.usu.edu/products/output.php. (Appendix 10)

UDAQ's Projection Calculations:
2010-2050: Temperatures are calculated using averaging.

TABLE 34B: SIP TEMPERATURE MIN (MIN)

Historic and Projection Data from outside sources (not UDAQ):
2006, 2007, 2008, 2009, and 2010 episode temperature data from Utah State University GIS Climate Search Data base. See http://climate.usurf.usu.edu/products/output.php. (Appendix 10)

UDAQ's Projection Calculations:
2011-2050: Temperatures are calculated using averaging.

TABLE 35: TAXABLE GASOLINE & GASOHOL (gallons)

Historic and Projection Data from outside sources (not UDAQ):

1995-2009: Data is supplied by the Utah State Tax Commission (UTC), 'Utah Motor Fuel Report." UDAQ's current UTC contact is Lynette Goodman, (801)297-3843. (Appendix 11)

UDAQ's Projection Calculations:

2010-2050: Projections are made using the change in USA gasoline (see Table 51).

TABLE 36: GOVERNMENT GASOLINE & GASOHOL (gallons)

Historic and Projection Data from outside sources (not UDAQ):

1995-2009: Data is supplied by the Utah State Tax Commission (UTC), 'Utah Motor Fuel Report." UDAQ's current UTC contact is Lynette Goodman, (801)297-3843. (Appendix 11)

UDAQ's Projection Calculations:

2010-2050: Projections are made using the change in US gasoline (see Table 51)

TABLE 37: US JET FUEL AND AVIATION CONSUMPTION (millions of gallons)

Historic and Projection Data from outside sources (not UDAQ):

2000-2009: Federal Aviation Administration's "FAA Aerospace Forecast Fiscal Years 2010-2030," Table 22 (Updated). (Appendix 13)
2010-2030: Federal Aviation Administration's "FAA Aerospace Forecast Fiscal Years 2010-2030," Table A-2 (Updated). (Appendix 13)

UDAQ's Projection Calculations:

2031-2050: Projections are made using the change in population.

TABLE 38: US JET FUEL AND AVIATION GASOLINE FUEL CONSUMPTION (Percent of change)

Historic and Projection Data from outside sources (not UDAQ):

2000-2009: Federal Aviation Administration's "FAA Aerospace Forecast Fiscal Years 2010-2030," Table 22 (Updated). (Appendix 13)
2010-2030: Federal Aviation Administration's "FAA Aerospace Forecast Fiscal Years 2010-2030," Table A-2 (Updated). (Appendix 13)

UDAQ's Projection Calculations:

2031-2050: Projections are made using the change in population.

TABLE 39: UTAH TAXABLE AVIATION FUEL (gallons)

Historic and Projection Data from outside sources (not UDAQ):

1995-2009: Data is supplied by the Utah State Tax Commission (UTC), 'Utah Aviation Fuel Report." UDAQ's current UTC contact is Lynette Goodman, (801)297-3843. (Appendix 11)

UDAQ's Projection Calculations:

2010-2030: Projections are calculated using the projected percent of change in aviation gasoline consumption in "FAA Aerospace Forecast Fiscal Years 2010-2030" Table 22: Total Jet Fuel and Aviation Gasoline Fuel Consumption U.S. Civil Aviation aircraft. (Appendix 13)
2031-2050: Projections are made using the change in US consumption of fuel (see Table 38).

TABLE 40: UTAH GOVERNMENT AVIATION FUEL (gallons)

Historic and Projection Data from outside sources (not UDAQ):

1995-2009: Data is supplied by the Utah State Tax Commission (UTC), 'Utah Aviation Fuel Report." UDAQ's current UTC contact is Lynette Goodman, (801)297-3843. (Appendix 11)

UDAQ's Projection Calculations:

2010-2030: Projections are calculated using the projected percent of change in jet fuel consumption in "FAA Aerospace Forecast Fiscal Years 2010-2030" Table 22: Total Jet Fuel and Aviation Gasoline Fuel Consumption U.S. Civil Aviation aircraft. (Appendix 13)
2031-2050: Projections are made using the change in US consumption of fuel (see Table 38).

TABLE 41: UTAH AVIATION FUEL (barrels)

Historic and Projection Data from outside sources (not UDAQ):
1995-2008: The amount of aviation gasoline and jet fuel used during the year is from the State of Utah, Natural Resources, Office of Energy & Resource Planning (ERP), Internet website http//geology.utah.gov/sep/energydata/index.htm entitled "Utah Energy and Mineral Statistics, Table 3.18 Consumption of Petroleum Products in Utah, 1960-2008. (Appendix 14)

UDAQ's Projection Calculations:

2009-2030: Projections are calculated using the projected percent of change in jet fuel consumption in "FAA Aerospace Forecast Fiscal Years 2010-2030" Table 22: Total Jet Fuel and Aviation Gasoline Fuel Consumption U.S. Civil Aviation aircraft. (Appendix 13)

2031-2050: Projections are made using the change in US consumption of fuel (see Table 38).

TABLE 42: UTAH GOVERNMENT AVIATION FUEL (gallons)
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: The amount of aviation gasoline and jet fuel used during the year is from the State of Utah, Natural Resources, Office of Energy & Resource Planning (ERP), Internet website http//geology.utah.gov/sep/energydata/index.htm entitled "Utah Energy and Mineral Statistics, Table 3.18 Consumption of Petroleum Products in Utah, 1960-2008. (Appendix 14)

UDAQ's Projection Calculations:

2009-2030: Projections are calculated using the projected percent of change in jet fuel consumption in "FAA Aerospace Forecast Fiscal Years 2010-2030" Table 22: Total Jet Fuel and Aviation Gasoline Fuel Consumption U.S. Civil Aviation aircraft. (Appendix 13)

2031-2050: Projections are made using the change in US consumption of fuel (see Table 38).

TABLE 43: FORECAST DOMESTIC AND INTERNATIONALLY AVAILABLE SEAT MILES PERCENTAGE OF CHANGE
UDAQ's Projection Calculations:
2009-2030: Projections are calculated using available seat miles from Federal Aviation Administration's "FAA Aerospace Forecast Fiscal Years 2010-2030," Page 5. (Appendix 13)
2031-2050: Projections based on population growth.

TABLE 44: AIRCRAFT - ALL AIRPORTS (operations)
Historic and Projection Data from outside sources (not UDAQ):

2004-2006: Data from the Utah Department Transportation Aeronautical Operations "Utah Continuous Airport System Plan 2007." Hill is from 2005 Inventory. Missing data calculated by subtracting 1 % for each year from known values. (Appendix 15)
2007-2008: Data from the Mobile Section of the Utah Division of Air Quality. (Appendix 16)

UDAQ's Projection Calculations:
2009-2030: Projections are calculated using the projected percent of change in domestic and international seat miles in "FAA Aerospace Forecast Fiscal Years 2010-2030" page 5. (Appendix 13)
2006-2008: An annual increase of 2% is used for airports that do not have projection information. Interpolation is used for airports that have projections.
2031-2050: An annual increase of 2% is used.

TABLE 45: AIRCRAFT BY COUNTY (operations)
Historic and Projection Data from outside sources (not UDAQ):

1995-2050: Add data from Table 44 by county.

TABLE 46: AIRCRAFT BY COUNTY - (operations at airports with aviation gasoline refueling)
Historic and Projection Data from outside sources (not UDAQ):

1995-2050: Add data from Table 44 by county. Fuel availability is from the US Department of Transportation, Federal Aviation Administration's "Airport Master Record." (Appendix 17)

TABLE 47: AIRCRAFT BY COUNTY - (operations at airports with jet fuel refueling)
Historic and Projection Data from outside sources (not UDAQ):

1995-2050: Add data from Table 44 by county. Fuel availability is from the US Department of Transportation, Federal Aviation Administration's "Airport Master Record." (Appendix 17)

TABLE 48: REFUELING OF ON ROAD VEHICLES (NOT USED FOR SIP)

UDAQ's Calculations:

Not used for SIP.

TABLE 49: SUM OF U.S.A.'s GASOLINE FOR VEHICLES (thousand gallons)

Historic and Projection Data from outside sources (not UDAQ):

2003-2008: Data is supplied by "Table C1. Estimated Consumption of Vehicle Fuels in the United States, by Fuel Type, 2003-2007" and 2004-2008 from the US Department of Energy. (Appendix 18)

UDAQ's Projection Calculations:

2009-2035: Calculation made using the "US Energy Information Administration Annual Energy Outlook 2010 Early Release Overview," Table 2 Energy Consumption by Sector and Source. (Appendix 19)
2036-2050: Annual gasoline change is assumed to be equal to annual change in USA human population as listed in Table 3 above.

TABLE 50: SUM OF U.S.A.'S GASOLINE FOR VEHICLES (quadrillion Btu)

Historic and Projection Data from outside sources (not UDAQ):

2006: Data from "US Energy Information Administration Annual Energy Outlook 2009," Table 10 Total United States.

UDAQ's Projection Calculations:

2007-2035: Calculation made using the "US Energy Information Administration Annual Energy Outlook 2010 Early Release," Table 2 Energy Consumption by Sector and Source. (Appendix 19)
2036-2050: Annual gasoline change is assumed to be equal to annual change in USA human population as listed in Table 3 above.

TABLE 51: SUM OF U.S.A.'S GASOLINE FOR VEHICLES (% if change)

UDAQ's Projection Calculations:

2007-2035: Calculation made using the "US Energy Information Administration Annual Energy Outlook 2010 Early Release," Table 2 Energy Consumption by Sector and Source. (Appendix 19)
2036-2050: Annual gasoline change is assumed to be equal to annual change in USA human population as listed in Table 3 above.

TABLE 52: HOUSES HEATING WITH COAL

Historic and Projection Data from outside sources (not UDAQ):

2000: Data is from the Governor's Office of Planning and Budget internet web page, http://www.governor.utah.gov/dea/census/Countiessf3profiles.htm, "Table DP-1, "Profile of General Demographic Characteristics: 2000." (Appendix 20)

UDAQ's Calculations:

1995-1999, 2001-2050: Data is constant for all years.

TABLE 53: RESIDENTIAL & COMMERCIAL COAL (tons)

Historic and Projection Data from outside sources (not UDAQ):

1995-2009: Data is from the State of Utah, Natural Resources, "Annual Review and Forecast of Utah Coal Production and Distribution 2008," Table A4. "Consumption of Coal in Utah by End Use, 1960-2009. (Appendix 21)

UDAQ's Projection Calculations:

2010-2030: They are calculated using the percent of change of coal consumption of nonelectric utilities. Data from Natural Resources, "Annual Review and Forecast of Utah Coal Production and Distribution 2008," Table A3. U.S. Coal consumption by sector, 1970-2030." (Appendix 21)
2031 - 2050: They are calculated using the percent of change of US population.

TABLE 54: US COAL CONSUMPTION (tons)

Historic and Projection Data from outside sources (not UDAQ):
1995-2030: Data from Natural Resources, "Annual Review and Forecast of Utah Coal Production and Distribution 2008," Table A3. U.S. Coal consumption by sector, 1970-2030." (Appendix 21)

UDAQ's Projection Calculations:
2031 - 2050: They are calculated using the percent of change of US population.

TABLE 55: PERCENT OF CHANGE IN US COAL CONSUMPTION (tons)
Historic and Projection Data from outside sources (not UDAQ):
1995-2030: Percentage calculated from data from Natural Resources, "Annual Review and Forecast of Utah Coal Production and Distribution 2008," Table A3. U.S. Coal consumption by sector, 1970-2030." (Appendix 21)

UDAQ's Projection Calculations:
2031 - 2050: Percentage used is the annual growth 2008-2035 percentage from US Energy Information Administration's "Annual Energy Outlook 2010 with projections to 2035," Table A2. Energy Consumption by Sector and Source. (Appendix 22)

TABLE 56: COMMERCIAL POINT SOURCES COAL BURNED
UDAQ's Calculations:
2005-2008: Data from UDAQ's inventory database and company workbooks. All sources except schools assumed to be in electrical utilities or other industrial categories. (Appendix 23)

UDAQ's Projection Calculations:
2009-2030: They are calculated using the percent of change of consumption from Table 55 above. Data is from Natural Resources, "Annual Review and Forecast of Utah Coal Production and Distribution 2008," Table A3. U.S. Coal consumption by sector, 1970-2030. (Appendix 21)

2031 - 2050: Percentage used is the annual growth 2008-2035 percentage from US Energy Information Administration's "Annual Energy Outlook 2010 with projections to 2035," Table A2. Energy Consumption by Sector and Source. (Appendix 22)

TABLE 57: US PETROLEUM PRODUCTS CONSUMPTION
Historic and Projection Data from outside sources (not UDAQ):
2006: Data is from the Energy Information Administration "Annual Energy Outlook 2009," Table A2 Energy Consumption by Sector and source."

2007-2035: Data is from the Energy Information Administration "Annual Energy Outlook 2010," Table A2. Energy Consumption by Sector and Source." (Appendix 22)

UDAQ's Projection Calculations:
2007-2035: Asphalt and Road Oil, Aviation Gasoline, Lubricants, and Other Petroleum Products calculated using Utah data for percentage of other petroleum. See Table 58.

2036 - 2050: Calculations made by using percentage of Utah population growth.

TABLE 58: CALCULATION OF ASPHALT, AVIATION GASOLINE, AND LUBRICANTS INCLUDED IN OTHER PETROLEUM PRODUCTS (See Table 60)

TABLE 59: US PETROLEUM CONSUMPTION PERCENTAGE CHANGE BY SECTOR FORECAST (quadrillion Btu)
UDAQ's Calculations:
1995-2050: Percentage of growth is calculated using Table 57.

TABLE 60: PETROLEUM PRODUCTS CONSUMPTION STATEWIDE
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: Data is from the State of Utah, Natural Resources, Office of Energy & Resource Planning (ERP), Internet website http//geology.utah.gov/sep/energydata/index.htm entitled "Utah Energy and Mineral Statistics," Table 3.18 Consumption of Petroleum Products in Utah, 1960-2008. (Appendix 14)

UDAQ's Projection Calculations:

2009-2050: The amount of consumption is changed by the sector forecast. (see Table 59)

TABLE 61: PERCENT OF GROWTH OF PETROLEUM PRODUCTS CONSUMPTION STATEWIDE

UDAQ's Projection Calculations:

1995-2050: Calculations are made using Table 60.

TABLE 62: TOTAL PETROLEUM PRODUCTS BY FUEL EXCLUDING PRODUCTS NOT USED BY RESIDENTIAL SECTOR

Historic and Projection Data from outside sources (not UDAQ):

1995-2008: Data is from the State of Utah, Natural Resources, Office of Energy & Resource Planning (ERP), Internet website http//geology.utah.gov/sep/energydata/index.htm entitled "Utah Energy and Mineral Statistics," Table 3.18 Consumption of Petroleum Products in Utah, 1960-2008. (Appendix 14)

UDAQ's Projection Calculations:

2009-2050: The amount of consumption each year is based on the forecast US energy consumption growth rate (see Table 60).

TABLE 63: PERCENTAGE OF PETROLEUM PRODUCTS BY FUEL EXCLUDING PRODUCTS NOT USED BY RESIDENTIAL SECTOR STATEWIDE

UDAQ's Calculations:

1995-2050: Percentage of growth is calculated using Table 62.

TABLE 64: PERCENTAGE OF GROWTH OF ENERGY CONSUMPTION BY SECTOR

Historic and Projection Data from outside sources (not UDAQ):

2007-2035: Data from Energy Information Administration, "Annual Energy Outlook 2010, Early Release Overview" Table 17. Projections of energy consumption by sector, 2007 and 2030. (Appendix 24)

UDAQ's Projection Calculations:

2009-2050: The amount of consumption each year is based on the forecast US energy consumption growth rate (see Table 60).

TABLE 65: CONSUMPTION OF PETROLEUM PRODUCTS IN UTAH BY END USE (thousand barrels) (excluded industrial, transportation, and electric utilities for kerosene and LPG)

Historic and Projection Data from outside sources (not UDAQ):

1995-2008: Data is from the State of Utah, Natural Resources, Office of Energy & Resource Planning (ERP), Internet website http//geology.utah.gov/sep/energydata/index.htm entitled "Utah Energy and Mineral Statistics," Table 3.19 Consumption of Petroleum Products in Utah by End Use, 1960-2008. (Appendix 14)

UDAQ's Projection Calculations:

2009-2030: Calculations made using data from Energy Information Administration, "Annual Energy Outlook 2009," Table 17. Projections of energy consumption by sector, 2007 and 2030 (Table 64). (Appendix 24)

TABLE 66: PERCENT OF CONSUMPTION OF PETROLEUM PRODUCTS IN UTAH BY END USE (thousand barrels)

UDAQ's Projection Calculations:

1995-2050: Percentage derived from Table 65.

TABLE 67: RESIDENTIAL DISTILLATE FUEL OIL (thousand barrels)

UDAQ's Projection Calculations:

1995-2050: The amount of fuel oil is calculated by multiplying the amount of petroleum products consumed by residential (Table 62) by the percentage of petroleum products that is fuel oil (Table 66). Data is from the State of Utah, Natural Resources, Office of Geological Survey.

TABLE 68: COMMERCIAL DISTILLATE OIL (thousand barrels)

UDAQ's Projection Calculations:

1995-2050: The amount of fuel oil is calculated by multiplying the amount of petroleum products consumed by commercial (Table 62) by the percentage of petroleum products that is fuel oil (Table 66). Data is from the State of Utah, Natural Resources, Office of Geological Survey.

TABLE 69: COMMERCIAL FUEL OIL USED BY POINT SOURCES (thousand barrels)

Historic and Projection Data from outside sources (not UDAQ):

2008: A query was made of all distillate, diesel, and fuel oil reported to UDAQ's Point Source Inventory for 2008. The query occurred after reports were received, checked, and added to UDAQ database. (Appendix 25)

UDAQ's Projection Calculations:

1996-2007: The amount of fuel oil burned by sources was estimated using the growth percentages in Table 64.
2009 -2050: The amount of fuel oil burned by sources was estimated using the growth percentages in Table 64.

TABLE 70: RESIDENTIAL PERCENTAGE OF KEROSENE AND LPG

UDAQ's Calculations:

1995-2050: Percentage is calculated using Table 65.

TABLE 71: COMMERCIAL PERCENTAGE OF KEROSENE AND LPG

UDAQ's Calculations:

1995-2050: Percentage is calculated using Table 65.

TABLE 72: KEROSENE USED BY POINT SOURCES (thousand barrels)

1996 - 2008: A query is made of all "industrial kerosene" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. Amount of kerosene burned by sources that were not inventoried in 2006 or 2007 that burn kerosene was estimated by using growth rates. (Appendix 26)

UDAQ's Projection Calculations:

2009 -2050: The amount of kerosene burned by sources was estimated using the growth percentages in Table 64.

TABLE 73: HOUSE HEATING - FUEL OIL, KEROSENE, ETC.

Historic and Projection Data from outside sources (not UDAQ):

2000: Data is from the Governor's Office of Planning and Budget internet web page, http://www.governor.utah.gov/dea/census/Countiessf3profiles.htm, "Table DP-1, "Profile of General Demographic Characteristics: 2000." (Appendix 20)

UDAQ's Calculations:

1995-1999, 2001-2050: Data is held constant for all years.

TABLE 74: KEROSENE (thousand barrels)

Historic and Projection Data from outside sources (not UDAQ):

1995-2008: The amount of kerosene used during the year is from the State of Utah, Natural Resources, Office of Energy & Resource Planning (ERP), Internet website http//geology.utah.gov/sep/energydata/index.htm entitled "Utah Energy and Mineral Statistics, Table 3.18 Consumption of Petroleum Products in Utah, 1960-2008." (Appendix 14)

UDAQ's Projection Calculations:

2009-2050: Estimates are calculated using the US energy consumption average annual percentage growth.

TABLE 75: HOUSE HEATING - BOTTLED, TANK, LPG (number of units)

Historic and Projection Data from outside sources (not UDAQ):

2000: Data is from the Governor's Office of Planning and Budget internet web page, http://www.governor.utah.gov/dea/census/Countiessf3profiles.htm, "Table DP-1, "Profile of General Demographic Characteristics: 2000." (Appendix 20)

UDAQ's Calculations:

1995-1999, 2001-2050: Data is held constant for all years.

TABLE 76: LPG PETROLEUM PRODUCTS (thousand barrels)

Historic and Projection Data from outside sources (not UDAQ):
1995-2008: The amount of LPG used during the year is from the Office of Energy & Resource Planning, "Utah Energy Statistical Abstract" Table 3.18 Consumption of Petroleum Products in Utah, 1960-2008. (Appendix 14)

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using US average annual percentage growth of energy consumption.

TABLE 77: LPG BURNED BY POINT SOURCES (thousand barrels)
Historic and Projection Data from outside sources (not UDAQ):
2007-2008: A query is made of all "industrial LPG" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. (Appendix 27)

UDAQ's Projection Calculations:
1995-2006: Emissions calculated using the petroleum usage growth rate and the actual 2007 usage.
2009 -2050: The amount of LPG burned by sources was estimated using the growth percentages in Table 64.

TABLE 78: RESIDUAL FUEL
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: The amount of residual oil used during the year is from the Office of Energy & Resource Planning, "Utah Energy Statistical Abstract," Table 3.18. (Appendix 14)

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the energy consumption by sector growth rate.

TABLE 79: RESIDENTIAL RESIDUAL FUEL
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: The amount of residual oil used during the year is from the Office of Energy & Resource Planning, "Utah Energy Statistical Abstract" Table 3.18 in Table 48. This is multiplied by the percentage of residential petroleum products used, Table 54. (Appendix 14)

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the energy consumption by sector growth rate.

TABLE 80: COMMERCIAL RESIDUAL FUEL
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: The amount of residual oil used during the year is from the Office of Energy & Resource Planning, "Utah Energy Statistical Abstract," Table 3.18 in Table 36. This is multiplied by the percentage of residential petroleum products used, Table 33. (Appendix 14)

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the energy consumption by sector growth rate.

TABLE 81: COMMERCIAL RESIDUAL FUEL OIL USED BY POINT SOURCES (thousand barrels)
1996-2008: A query is made of all residual and heavy fuel oil reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. Amount of kerosene burned by sources that were not inventoried in 2007 that burn kerosene was estimated by using growth rates. (Appendix 28)

UDAQ's Projection Calculations:
2009 -2050: The amount of residual fuel burned by sources was estimated using the growth percentages in Table 64.

TABLE 82: NATURAL GAS, GSDTH CONSUMERS, ("General Service;" i.e., residential and small commercial), (DTh)
Historic and Projection Data from outside sources (not UDAQ):

2005-2008: Reports are from natural gas companies: "QUESTAR Corp" (~99.5%) and "UTAH GAS Company" (~0.5%). UTAH GAS was purchased by QUESTAR in 2001. Kim Hinstow of QUESTAR is our contact, (801) 230-9387. (Appendix 29)

UDAQ's Projection Calculations:

2009-2050: It is assumed that this data is somewhat related to the population in a given county, thus all other years are estimated or projected using the same annual percentage growth as is projected for Utah population.

TABLE 83: NATURAL GAS, NONGSDTH CONSUMERS, ("Non-General Service," I.e., large commercial and industrial), (DTh)

Historic and Projection Data from outside sources (not UDAQ):

2005-2008: Reports are from natural gas companies: "QUESTAR Corp" (~99.5%) and "UTAH GAS Company" (~0.5%). UTAH GAS was purchased by QUESTAR in 2001, so now QUESTAR is the only Utah supplier. Kim Hinstow of QUESTAR is our contact, (801) 230-9387. (Appendix 29)

UDAQ's Projection Calculations:

2009-2050: It is assumed that this data is somewhat related to the population in a given county, thus all other years are estimated or projected using the same annual percentage growth as is projected for Utah population.

TABLE 84: QUERY OF POINT SOURCE'S NATURAL GAS CONSUMPTION (million cubic feet)

Historic and Projection Data from outside sources (not UDAQ):

1996- 2008: A query is made of "actual natural gas consumption" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. Point sources that do not get natural gas through Questar are not included in this estimate. (Appendix 30)

UDAQ's Projection Calculations:

2009-2050: All projections are calculated by percentage of manufacturing growth.

TABLE 85: U.S. HOUSE UNITS USING FIREPLACES WITH INSERTS FOR HEATING

Historic and Projection Data from outside sources (not UDAQ):

2005: Data is from the U.S. Department of Housing and Urban Development Office of Policy Development and Research's "American Housing Survey for the United States: 2005" Table 1A-4, Selected Equipment and Plumbing-All Housing Units. Governor's Office of Planning and Budget internet web page, http://www.governor.utah.gov/dea/census/Countiessf3profiles.htm." (Appendix 31)

UDAQ's Calculations:

1995 - 2004, 2006 - 2050: Data is held constant for all years.

TABLE 86: U.S. HOUSE UNITS USING FIREPLACES WITHOUT INSERTS FOR HEATING

Historic and Projection Data from outside sources (not UDAQ):

2005: Data is from the U.S. Department of Housing and Urban Development Office of Policy Development and Research's "American Housing Survey for the United States: 2005" Table 1A-4, Selected Equipment and Plumbing-All Housing Units. Governor's Office of Planning and Budget internet web page, http://www.governor.utah.gov/dea/census/Countiessf3profiles.htm." (Appendix 31)

UDAQ's Calculations:

1995 - 2004, 2006 - 2050: Data is held constant for all years.

TABLE 87: U.S. HOUSE UNITS USING FIREPLACES WITH INSERTS FOR AESTHETICS

Historic and Projection Data from outside sources (not UDAQ):

2005: Data is from the U.S. Department of Housing and Urban Development Office of Policy Development and Research's "American Housing Survey for the United States: 2005" Table 1A-4, Selected Equipment and Plumbing-All Housing Units. Governor's Office of Planning and Budget internet web page, http://www.governor.utah.gov/dea/census/Countiessf3profiles.htm." (Appendix 31)

UDAQ's Calculations:

1995 - 2004, 2006 - 2050: Data is held constant for all years.

TABLE 88: U.S. HOUSE UNITS USING FIREPLACES WITHOUT INSERTS FOR AESTHETICS

Historic and Projection Data from outside sources (not UDAQ):

2005: Data is from the U.S. Department of Housing and Urban Development Office of Policy Development and Research's "American Housing Survey for the United States: 2005" Table 1A-4, Selected Equipment and Plumbing-All Housing Units. Governor's Office of Planning and Budget internet web page, http://www.governor.utah.gov/dea/census/Countiessf3profiles.htm." (Appendix 31)

UDAQ's Calculations:

1995 - 2004, 2006 - 2050: Data is held constant for all years.

TABLE 89: U.S. HOUSE UNITS USING WOOD FUEL

Historic and Projection Data from outside sources (not UDAQ):

2005: Data is from the U.S. Department of Housing and Urban Development Office of Policy Development and Research's "American Housing Survey for the United States: 2005" Table 1A-5, Selected Equipment and Plumbing-All Housing Units. Governor's Office of Planning and Budget internet web page, http://www.governor.utah.gov/dea/census/Countiessf3profiles.htm." (Appendix 31)

UDAQ's Calculations:

1995 - 2004, 2006 - 2050: Data is held constant for all years.

TABLE 90: CORDS OF WOOD USED FOR HEATING IN UTAH

Historic and Projection Data from outside sources (not UDAQ):

1995-2007: Data is from the State of Utah, Natural Resources, Office of Energy & Resource Planning (ERP), Internet website http//geology.utah.gov/sep/energydata/index.htm entitled "Utah Energy and Mineral Statistics," Table 6.7 Renewable Energy Consumption in Utah: 1960-2007. (Appendix 14)

UDAQ's Calculations:

2008-2050: Estimates are made using the growth of US consumption of biomass (see Table 91).

TABLE 91: PERCENTAGE OF GROWTH OF CONSUMPTION OF BIOMASS FOR US (Quadrillion Btu)

Historic and Projection Data from outside sources (not UDAQ):

1995-2008: The amount of wood used during the year is from the State of Utah, Natural Resources, Office of Energy & Resource Planning (ERP), Internet website http//geology.utah.gov/sep/energydata/index.htm entitled "Utah Energy and Mineral Statistics, Table 6.5 US Renewable Energy Consumption by Source 1949-2008." (Appendix 14)
2020, 2030, and 2035: Energy Information Administration's "Annual Energy Outlook 2010, Early Release Overview," Table 1. Comparison of projections in the AEO2010 and Updated AEO2009 reference cases, 2008-2035. (Appendix 24)

UDAQ's Calculations:

2009-2019; 2021-2029; and 2030-2035: Calculations done by interpolation.
2031-2050: Estimations made by averaging.

TABLE 92: HOUSE HEATING - WOOD (number of units)

Historic and Projection Data from outside sources (not UDAQ):

2000: Data is from the Governor's Office of Planning and Budget internet web page, http://www.governor.utah.gov/dea/census/Countiessf3profiles.htm, "Table DP-1, "Profile of General Demographic Characteristics: 2000." (Appendix 20)

UDAQ's Calculations:

1995-1999, 2001-2050: Data is held constant for all years.

TABLE 93: PRESCRIBED AND WILD FIRES excluding AGRICULTURAL FIRES (acres burned)

Historic and Projection Data from outside sources (not UDAQ):

1995, 1996, 1997: Utah Dept. of Natural Resources, Division of Forestry, Fire & State Lands (FFSL) adds up the burning on state, federal, and private range and forest lands inside Utah boundaries and prepares an annual report (~6 pages). (Appendix 32)

1999: Beginning in 1999, Greg Zschaechner received all outside data (including any data from FFSL) and submitted burn data to UDAQ directly. (Appendix 32)
2002 and 2005: Data is from Greg Zschaechner of the Bureau of Land Management. (Appendix 32)
2007 - 2008: Data is from Dan Washington of the Bureau of Land Management. (Appendix 32)

UDAQ's Projection Calculations:
1997-1998: Estimates use the mean average of 3 known years, 1995, 1996, and 1999.
2006-2008: Actual Wildfire burned acreage - Prescribed fires are calculated by averaging previous amounts.
2000-2001, 2003-2004, and 2009-2050: Estimates are calculated by averaging all values previous to the cell.

TABLE 94: WILDFIRES (acres burned)
Historic and Projection Data from outside sources (not UDAQ):
1995, 2002, and 2005: Utah Dept. of Natural Resources, Division of Forestry, Fire & State Lands (FFSL) adds up the burning on state, federal, and private range and forest lands inside Utah boundaries. This was divided between wild and prescribed in 1995, 2002, and 2005. (Appendix 32)
2006-2008: Data is from Dan Washington of the Bureau of Land Management. (Appendix 32)

UDAQ'S Projection Calculations:

2003-2004 and 2009-2050: Estimates are calculated by averaging wild and prescribed fire totals and breaking out wild and prescribed fires from this amount.

TABLE 95: PRESCRIBED FIRES (acres burned)
Historic and Projection Data from outside sources (not UDAQ):
1995 2002- 2005, 2008: Utah Dept. of Natural Resources, Division of Forestry, Fire & State Lands (FFSL) adds up the burning on state, federal, and private range and forest lands inside Utah boundaries. This was divided between wild and prescribed in 1995, 2002, and 2005. (Appendix 32)

UDAQ'S Projection Calculations:
2006-2007, 2009-2050: Estimates are calculated by averaging previous amounts.

TABLE 96: REFUELING (tons/day) (Included in the Mobile emissions.)
Historic and Projection Data from EPA NONROAD 2004:
Included in Mobile emissions.

TABLE 97: WHEAT (harvested acres)
Historic and Projection Data from outside sources (not UDAQ):

1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," for years 1997, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008 and 2009 section entitled "County Estimates: All Wheat, All Cropping Practices, Utah." (Appendix 33)

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 98: WHEAT (planted acres)
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," for years 1997, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008 and 2009 section entitled "County Estimates: All Wheat, All Cropping Practices, Utah." (Appendix 33)

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 99: BARLEY (harvested acres)
Historic and Projection Data from outside sources (not UDAQ):

1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," for years 1997, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008, and 2009 section entitled "County Estimates: All Barley, All Cropping Practices, Utah." (Appendix 33)

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 100: BARLEY (planted acres)
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," for years 1997, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008, and 2009 section entitled "County Estimates: All Barley, All Cropping Practices, Utah." (Appendix 33)

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 101: CORN (harvested acres)
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," for years 1997, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008, and 2009 section entitled "County Estimates: Corn, All Cropping Practices, Utah." (Appendix 33)

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 102: CORN (planted acres)
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," for years 1997, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008, and 2009 section entitled "County Estimates: Corn, All Cropping Practices, Utah." (Appendix 33)

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 103: OATS (harvest acres)
Historic and Projection Data from outside sources (not UDAQ):

1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," for years 1997, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008, and 2009 section entitled "Oats, All Cropping Practices, Utah." (Appendix 33)

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 104: OATS (planted acres)
Historic and Projection Data from outside sources (not UDAQ):

1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," for years 1997, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008, and 2009 section entitled "Oats, All Cropping Practices, Utah." (Appendix 33)

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 105: HAY (harvested acres)

Historic and Projection Data from outside sources (not UDAQ):

1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," for years 1997, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008, and 2009 section entitled "County Estimates: All Hay, All Cropping Practices, Utah." (Appendix 33)

UDAQ's Projection Calculations:

2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 106: DRY BEANS (Planted Acres)

Historic and Projection Data from outside sources (not UDAQ):

1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," for years 1997, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008, and 2009 section entitled "Field Crops: Acreage, Yield, Production, and Value, Utah." (Appendix 33)

UDAQ's Projection Calculations:

2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 107: DRY BEANS (Harvested Acres)

Historic and Projection Data from outside sources (not UDAQ):

1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," for years 1997, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008, and 2009 section entitled "Field Crops: Acreage, Yield, Production, and Value, Utah." (Appendix 33)

UDAQ's Projection Calculations:

2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 108: POTATOES (Planted Acres)

Historic and Projection Data from outside sources (not UDAQ):

2003: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," for year 2004 section entitled "Potatoes: Production, Farm Use, Sales and Value, Utah , 1996-2003. (Appendix 33)

UDAQ's Projection Calculations:

2004-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 109: POTATOES (Harvested Acres)

Historic and Projection Data from outside sources (not UDAQ):

2003: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," for year 2004 section entitled "Potatoes: Production, Farm Use, Sales and Value, Utah , 1996-2003. (Appendix 33)

UDAQ's Projection Calculations:

2004-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 110: ONIONS (Planted Acres)

Historic and Projection Data from outside sources (not UDAQ):

2003: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," for year 2004 section entitled "Onions: Summer Storage (Fresh Market), Acreage, Yield Production and Value, Utah 1996-2003." Estimates not published beginning in 2005. (Appendix 33)

UDAQ's Projection Calculations:

2005-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 111: ONIONS (Harvested Acres)

Historic and Projection Data from outside sources (not UDAQ):

2003: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," for year 2004 section entitled "Onions: Summer Storage (Fresh Market), Acreage, Yield Production and Value, Utah 1996-2003." Estimates not published beginning in 2005. (Appendix 33)

UDAQ's Projection Calculations:

2005-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 112: COMMERCIAL APPLES (Bearing Acres)

Historic and Projection Data from outside sources (not UDAQ):

1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," for years 1997, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008, and 2009 section entitled "Fruit: Acreage, Yield, Production, Use, and Value, Utah." (Appendix 33)

UDAQ's Projection Calculations:

2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 113: TART CHERRIES (Bearing Acres)

Historic and Projection Data from outside sources (not UDAQ):

1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," for years 1997, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008, and 2009 section entitled "Fruit: Acreage, Yield, Production, Use, and Value, Utah." (Appendix 33)

UDAQ's Projection Calculations:

2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 114: SWEET CHERRIES (Bearing Acres)

Historic and Projection Data from outside sources (not UDAQ):

1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," for years 1997, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008, and 2009 section entitled "Fruit: Acreage, Yield, Production, Use, and Value, Utah." (Appendix 33)

UDAQ's Projection Calculations:

2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 115: PEARS (Bearing Acres)

Historic and Projection Data from outside sources (not UDAQ):

1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," for years 1997, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008, and 2009 section entitled "Fruit: Acreage, Yield, Production, Use, and Value, Utah." (Appendix 33)

UDAQ's Projection Calculations:

2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 116: PEACHES (Bearing Acres)

Historic and Projection Data from outside sources (not UDAQ):

1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," for years 1997, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008, and 2009 section entitled "Fruit: Acreage, Yield, Production, Use, and Value, Utah." (Appendix 33)

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 117: CATTLE AND COWS FOR MILK AND MEAT (head count)
Historic and Projection Data from outside sources (not UDAQ):
1995-2009: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," for 1997, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008, and 2009 section entitled "County Estimates: Cattle, Utah." (Appendix 33)

UDAQ's Projection Calculations:
2010-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 118: CATTLE AND COWS FOR MEAT (head count)
Historic and Projection Data from outside sources (not UDAQ):
1995-2009: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," for 1997, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008, and 2009 section entitled "County Estimates: Cattle, Utah." (Appendix 33)

UDAQ's Projection Calculations:
2010-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 119: CATTLE AND COWS FOR MILK (head count)
Historic and Projection Data from outside sources (not UDAQ):

1995-2009: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," for years 1997, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008, and 2009 section entitled "County Estimates: Cattle, Utah." (Appendix 33)

UDAQ's Projection Calculations:
2010-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 120: CHICKENS FOR EGGS AND MEAT (head count)
Historic and Projection Data from outside sources (not UDAQ):

1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," for 1997, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008, and 2009 section entitled "Chickens & Eggs." (Appendix 33)

UDAQ's Projection Calculations:
2009-2050: Projections are calculated using the agricultural employment growth rate.

TABLE 121: SHEEP & LAMBS (head count)
Historic and Projection Data from outside sources (not UDAQ):

1995-2009: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," for 1997, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008, and 2009 section entitled "County Estimates: Breeding Sheep and Lambs, Utah." (Appendix 33)

UDAQ's Projection Calculations:
2010-2050: All projections are calculated using the agricultural employment growth rate.

TABLE 122: TURKEYS (head count)

1999 and 2005: Norbest internet site, "norbest.com," reports 5,000,000 turkeys sent to market from farms in Juab, Sanpete, Sevier, and Washington counties. (DOAg publication does not give turkey data.) (Category needs more research in future.) (Appendix 34)

UDAQ's Projection Calculations:

1995-1998, 2000-2004, and 2006-2050: The value is held constant since only one year is given. Employee of Norbest reconfirmed in 2005 that they grow 5,000,000 turkeys per year.

TABLE 123: PIGS AND HOGS (head count)

Historic and Projection Data from outside sources (not UDAQ):

1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "2001, 2003, 2006, 2007, 2008, and 2009 Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual Report," section entitled "Hogs and Pigs: Balance Sheet, Utah, 2000-2007." (Appendix 33)

UDAQ's Projection Calculations:

2009-2050: All projections are calculated using the agricultural employment growth rate.

TABLE 124: WILD ANIMALS, All Of Utah. (head count)

Historic and Projection Data from outside sources (not UDAQ):

1999-2002, 2020-2050: Data is supplied by the Utah's Dept. of Natural Resources (DNR), Wildlife Resources, Steve Cranney et al., (801)538-4870. His office conducts statistical head counting of major animal groups (1999-2002), and specifies target numbers. (Appendix 36)

2005 (excluding antelope): Data is from Utah Division of Wildlife Resources website www.Wildlife.Utah.gov/proclamations/2006_biggame/

2002-2008: Deer, elk, antelope from "Utah Big Game Annual Report 2008," Dept. of Natural Resources. (Appendix 35)

2000 and 2005: Moose from "Utah Big Game Annual Report 2007," Dept. of Natural Resources.

UDAQ's Projection Calculations:

1995-1998, 2003-2004, and 2006-2019: Estimates are made by UDAQ using straight-line extrapolation between DNR historic and projection data.

TABLE 125: PAVED ROADS (lane miles of pavement)

Historic and Projection Data from outside sources (not UDAQ):

1995-2009: Itemized printouts are generated by the Utah Dept. of Transportation (DOT). (Appendix 37)

UDAQ's Projection Calculations:

2010: Domain counties emissions are calculated using regression analysis. (Appendix 84) Other counties are calculated using population.

TABLE 126: PAVED ROADS PERCENT OF CHANGE (lane miles of pavement)

UDAQ's Projection Calculations:

1995-2050: Percentage of growth is calculated using Table 125.

TABLE 127: CLASS B AND C ROAD ALLOCATIONS

Historic and Projection Data from outside sources (not UDAQ):

1995-2009: Data is from the Utah Dept. of Transportation (DOT), printed publication "Annual Statistic Summary" for the years 1995-2004 and 2006-2009 and "Systems Planning and Programming 2005 Annual Statistical Summary." (Appendix 38)

UDAQ's Projection Calculations:

2010-2050: All projections are calculated using the construction jobs growth rate.

TABLE 128: NEW RESIDENTIAL HOUSES AND APARTMENTS (new dwelling units)

Historic and Projection Data from outside sources (not UDAQ):

1995-2009: Data is from the "Bureau of Economic and Business Research" (BEBR) "Utah Construction Report Table 3, "Summary of Residential Construction by County January through December" for years 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, and 2009." (Appendix 39)

UDAQ's Projection Calculations:

2010-2050: Year value is multiplied by the annual change in human population for each progressive year.

TABLE 129: SINGLE FAMILY HOME CONSTRUCTION IN UTAH (INCLUDING CABINS)

Historic and Projection Data from outside sources (not UDAQ):
1995-2009: Data is from the "Bureau of Economic and Business Research" (BEBR) "Utah Construction Report Table 3, "Summary of Residential Construction by County January through December" for years 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, and 2009." (Appendix 39)

UDAQ's Projection Calculations:
2010-2050: Year value is multiplied by the annual change in human population for each progressive year.

TABLE 130: TWO-FAMILY HOME CONSTRUCTION IN UTAH (BUILDINGS)
Historic and Projection Data from outside sources (not UDAQ):
1995-2009: Data is from the "Bureau of Economic and Business Research" (BEBR) "Utah Construction Report Table 3, "Summary of Residential Construction by County January through December" for years 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, and 2009." (Appendix 39)

UDAQ's Projection Calculations:
2010-2050: Year value is multiplied by the annual change in human population for each progressive year.

TABLE 131: APARTMENT CONSTRUCTION IN UTAH
Historic and Projection Data from outside sources (not UDAQ):
1995-2009: Data is from the "Bureau of Economic and Business Research" (BEBR) "Utah Construction Report Table 3, "Summary of Residential Construction by County January through December" for years 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, and 2009." (Appendix 39)

UDAQ's Projection Calculations:
2010-2050: Year value is multiplied by the annual change in human population for each progressive year.

TABLE 132: NON-RESIDENTIAL CONSTRUCTION VALUE
Historic and Projection Data from outside sources (not UDAQ):
1995-2005: Data is from the 1995 through 2007 "Bureau of Economic and Business Research" (BEBR) "Utah Construction Report," Table 2, Permit-Authorized Construction in Utah, January through December. (Appendix 42)
2006-2009: Data is from the Bureau of Economic and Business Research webpage "Table 2, Utah Construction Information Database located at http://webapps.utah.edu/bebr/report/table5.tpl?_Motype=Number&_YRtype=Number&_Cosort=1&_Codesort=2&_Mosort=3&_Cotype=Number&_leModatarq=12&_eqYRdatarq=2005&_eqCodatarq=&_ShowDetails=county&submit=Submit. (Appendix 86)

UDAQ's Projection Calculations:
2010-2050: Year 2005 value is multiplied by the annual change in human population for each progressive year.

TABLE 133: QUERY OF POINT SOURCE VOC FROM ARCHITECTURAL COATINGS (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
1996-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. Throughputs for sources that did not report in various years are calculated by averaging data from years in which they did report. (Appendix 41)

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in population.

TABLE 134: QUERY OF POINT SOURCE VOC FROM AUTOMOBILE SURFACE COATINGS (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. Throughputs for sources that did not report in various years are calculated by averaging data from years in which they did report. (Appendix 42)

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing employment.

TABLE 135: NEI/SIP - QUERY OF POINT SOURCE VOC FROM PAPER, FILM AND FOIL COATING.

Historic and Projection Data from outside sources (not UDAQ):

2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. Throughputs for sources that did not report in various years are calculated by averaging data from years in which they did report.

UDAQ's Projection Calculations:

2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 136: QUERY OF POINT SOURCE VOC FROM INDUSTRIAL SURFACE COATINGS (tons of VOC)

Historic and Projection Data from outside sources (not UDAQ):

2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. Throughputs for sources that did not report in various years are calculated by averaging data from years in which they did report. (Appendix 43)

UDAQ's Projection Calculations:

2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 137: QUERY OF POINT SOURCE VOC FROM METAL FURNITURE AND FIXTURES SURFACE COATINGS (tons of VOC)

Historic and Projection Data from outside sources (not UDAQ):

2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. Throughputs for sources that did not report in various years are calculated by averaging data from years in which they did report. (Appendix 43)

UDAQ's Projection Calculations:

2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 138: QUERY OF POINT SOURCE VOC FROM METAL CONTAINERS SURFACE COATINGS (tons of VOC)

Historic and Projection Data from outside sources (not UDAQ):

2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. Throughputs for sources that did not report in various years are calculated by averaging data from years in which they did report. (Appendix 43)

UDAQ's Projection Calculations:

2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 139: QUERY OF POINT SOURCE VOC FROM NEW AUTOMOBILES SURFACE COATINGS (tons of VOC)

Historic and Projection Data from outside sources (not UDAQ):

2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. Throughputs for sources that did not report in various years are calculated by averaging data from years in which they did report. (Appendix 43)

UDAQ's Projection Calculations:

2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 140: QUERY OF POINT SOURCE VOC FROM MACHINERY AND EQUIPMENT SURFACE COATINGS (tons of VOC)

Historic and Projection Data from outside sources (not UDAQ):

2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. Throughputs for sources that did not report in various years are calculated by averaging data from years in which they did report. (Appendix 43)

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 141: QUERY OF POINT SOURCE VOC FROM APPLIANCES SURFACE COATINGS (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. Throughputs for sources that did not report in various years are calculated by averaging data from years in which they did report. (Appendix 43)

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 142: QUERY OF POINT SOURCE VOC FROM OTHER TRANSPORTATION EQUIPMENT SURFACE COATINGS (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. Throughputs for sources that did not report in various years are calculated by averaging data from years in which they did report. (Appendix 43)

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 143: QUERY OF POINT SOURCE VOC FROM SHEET, STRIP, AND COIL SURFACE COATINGS (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. Throughputs for sources that did not report in various years are calculated by averaging data from years in which they did report. (Appendix 43)

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 144: QUERY OF POINT SOURCE VOC FROM FACTORY FINISHED WOOD SURFACE COATINGS (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. Throughputs for sources that did not report in various years are calculated by averaging data from years in which they did report. (Appendix 43)

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 145: NEI/SIP - QUERY OF POINT SOURCE VOC FROM AIRCRAFT SURFACE COATINGS (tons/year)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. Throughputs for sources that did not report in various years are calculated by averaging data from years in which they did report. (Appendix 43)

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 146: NEI/SIP - QUERY OF POINT SOURCE VOC FROM RAILROAD SURFACE COATINGS (tons/year)
Historic and Projection Data from outside sources (not UDAQ):

2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. Throughputs for sources that did not report in various years are calculated by averaging data from years in which they did report. (Appendix 43)

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 147: QUERY OF POINT SOURCE VOC FROM ELECTRICAL INSULATION SURFACE COATINGS (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. Throughputs for sources that did not report in various years are calculated by averaging data from years in which they did report. (Appendix 43)

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 148: QUERY OF POINT SOURCE VOC FROM OTHER PRODUCTS SURFACE COATINGS (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. Throughputs for sources that did not report in various years are calculated by averaging data from years in which they did report. (Appendix 43)

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 149: QUERY OF POINT SOURCE VOC FROM HIGH PERFORMANCE MAINTENANCE SURFACE COATINGS (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. Throughputs for sources that did not report in various years are calculated by averaging data from years in which they did report. (Appendix 43)

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 150: QUERY OF POINT SOURCE VOC FROM OTHER SPECIAL PURPOSE SURFACE COATINGS (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. Throughputs for sources that did not report in various years are calculated by averaging data from years in which they did report. (Appendix 43)

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 151: QUERY OF ALL POINT SOURCE VOC FROM SOLVENT CLEANING AND DEGREASING (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. Throughputs for sources that did not report in various years are calculated by averaging data from years in which they did report. (Appendix 44)

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 152: QUERY OF POINT SOURCE VOC FROM AUTO SOLVENT CLEANING AND DEGREASING (tons of VOC)

Historic and Projection Data from outside sources (not UDAQ):

2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. Throughputs for sources that did not report in various years are calculated by averaging data from years in which they did report. (Appendix 44)

UDAQ's Projection Calculations:

2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 153: QUERY OF POINT SOURCE VOC FROM ELECTRONIC SOLVENT CLEANING AND DEGREASING (tons of VOC)

Historic and Projection Data from outside sources (not UDAQ):

2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. Throughputs for sources that did not report in various years are calculated by averaging data from years in which they did report. (Appendix 44)

UDAQ's Projection Calculations:

2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 154: QUERY OF POINT SOURCE VOC FROM OTHER SOLVENT CLEANING AND DEGREASING (tons of VOC)

Historic and Projection Data from outside sources (not UDAQ):

2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received, checked, and added to UDAQ database. Throughputs for sources that did not report in various years are calculated by averaging data from years in which they did report. (Appendix 44)

UDAQ's Projection Calculations:

2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 155: QUERY OF POINT SOURCE VOC FROM BAKERIES (SIC beginning with 2051 through 2053. Units are "tons voc per year").

Historic and Projection Data from outside sources (not UDAQ):

1996-2008: A query is made of all bakeries in Utah. The query occurs after reports are received, checked, and added to UDAQ database. Throughputs for sources that did not report in various years are calculated by averaging data from years in which they did report.

UDAQ's Projection Calculations:

2009-2050: Calculation made using the percentage of change in population.

TABLE 156: QUERY OF POINT SOURCE VOC FROM GRAPHIC ARTS (SCC BEGINNING WITH 402)

Historic and Projection Data from outside sources (not UDAQ):

2000-2008: A query is made of all graphic art processes in Utah. The query occurs after reports are received, checked, and added to UDAQ database. Throughputs for sources that did not report in various years are calculated by averaging data from years in which they did report. (Appendix 45)

UDAQ's Projection Calculations:

2009-2050: Calculation made using the percentage of change in manufacturing employment.

TABLE 157: QUERY OF AMMONIA FROM POINT SOURCES

Historic and Projection Data from outside sources (not UDAQ):

Data included in Point Source data.

TABLE 158: LEAKING UNDERGROUND STORAGE TANKS (sites)

Historic and Projection Data from outside sources (not UDAQ):

2000-2009: The list of LUST sites is from the Utah State Underground Storage program website. (Appendix 46)

UDAQ's Projection Calculations:
2010-2050: The estimates are calculated using average of prior years.

TABLE 159: SEWER POINT SOURCES (VOC tons/year)
Historic and Projection Data from outside sources (not UDAQ):
2000-2007: A query is made of all sewer ozone point sources in domain. (Appendix 47)

UDAQ's Projection Calculations:
2010-2050: The estimates are calculated using the percent of population growth.

TABLE 160: ACRES OF AGRICULTURAL BURNED
Historic and Projection Data from outside sources (not UDAQ)
1996 and 2002: Utah State University survey on agricultural burning is used. (Appendix 48)

UDAQ's Projection Calculations:
1997-2001, and 2003-2050: The estimates are calculated using the growth rate of agricultural jobs.

TABLE 161: DRY CLEANING FACILITIES
Historic and Projection Data from outside sources (not UDAQ):
2005 and 2008: Data from the Utah Division of Air Quality's HAPS section. (Appendix 49)

UDAQ's Projection Calculations:
2006-2007: Number of facilities is found by interpolation.
2009-2050: Number of facilities is calculated using the percent of growth in population.

TABLE 162: DRY CLEANING EMPLOYEES
Historic and Projection Data from outside sources (not UDAQ):
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008 National Emissions Inventory Data & Documentation." (Appendix 7)

UDAQ's Projection Calculations:
2007-2050: grown by population growth.

TABLE 163: EMISSIONS FROM POINT SOURCE DRY CLEANING FACILITIES
Historic and Projection Data from outside sources (not UDAQ):
2000 - 2008: Data from the Utah Division of Air Quality's emissions data base. No point sources.

UDAQ's Projection Calculations:
2007-2050: grown by population growth.

TABLE 164: CO AIRCRAFT EMISSIONS
Historic and Projection Data from outside sources (not UDAQ):
1995-2004: No data.
2005, 2007-2009: Data from the Utah Division of Air Quality's Mobile Section. (Appendix 50)

UDAQ's Projection Calculations:
2006, 2010-2050: Emissions calculated using the forecast of domestic and internationally available aircraft seat miles percentage of change.

TABLE 165: VOC AIRCRAFT EMISSIONS
Historic and Projection Data from outside sources (not UDAQ):
1995-2004: No data.

2005, 2007-2009: Data from the Utah Division of Air Quality's Mobile Section. (Appendix 50)

UDAQ's Projection Calculations:
2006, 2010-2050: Emissions calculated using the forecast of domestic and internationally available aircraft seat miles percentage of change.

TABLE 166: NOx AIRCRAFT EMISSIONS
Historic and Projection Data from outside sources (not UDAQ):
1995-2004: No data.
2005, 2007-2009: Data from the Utah Division of Air Quality's Mobile Section. (Appendix 50)

UDAQ's Projection Calculations:
2006, 2010-2050: Emissions calculated using the forecast of domestic and internationally available aircraft seat miles percentage of change.

TABLE 167: SOx AIRCRAFT EMISSIONS
Historic and Projection Data from outside sources (not UDAQ):
1995-2004: No data.
2005, 2007-2009: Data from the Utah Division of Air Quality's Mobile Section. (Appendix 50)

UDAQ's Projection Calculations:
2006, 2010-2050: Emissions calculated using the forecast of domestic and internationally available aircraft seat miles percentage of change.

TABLE 168: PM10 AIRCRAFT EMISSIONS
Historic and Projection Data from outside sources (not UDAQ):
1995-2004: No data.
2005, 2007-2009: Data from the Utah Division of Air Quality's Mobile Section. (Appendix 50)

UDAQ's Projection Calculations:
2006, 2010-2050: Emissions calculated using the forecast of domestic and internationally available aircraft seat miles percentage of change.

TABLE 169: PM25 AIRCRAFT EMISSIONS
Historic and Projection Data from outside sources (not UDAQ):
1995-2004: No data.
2005, 2007-2009: Data from the Utah Division of Air Quality's Mobile Section. (Appendix 50)

UDAQ's Projection Calculations:
2006, 2010-2050: Emissions calculated using the forecast of domestic and internationally available aircraft seat miles percentage of change.

TABLE 170: VEHICLE MILES TRAVELED DAILY (VMT)
Historic and Projection Data from outside sources (not UDAQ):
1995-2009: Utah Highway Performance Monitoring System and Traffic on Utah Highways at http://www.udot.utah.gov/main/f?p=100:pg:0:::V,T:,530. Other data is supplied by the MPOs. (Appendix 51)

UDAQ's Projection Calculations:
2010-2030: Emissions for some years for some counties were provided by UDOT and MPO. Interalation was used to estimate the in between years. Population growth was used for other county estimates.
2010-2050: Growth is based on population.

TABLE 171: VEHICLE MILES TRAVELED PERCENTAGE CHANGE
Historic and Projection Data from outside sources (not UDAQ):
1995-2009: Utah Highway Performance Monitoring System and Traffic on Utah Highways at http://www.udot.utah.gov/main/f?p=100:pg:0:::V,T:,530. Other data is supplied by the MPOs. (Appendix 51)

UDAQ's Projection Calculations:
2010-2030: Emissions for some years for some counties were provided by UDOT and MPO. Interalation was used to estimate the in between years. Population growth was used for other county estimates.
2010-2050: Growth is based on population.

TABLE 172: VEHICLE MILES TRAVELED ANNUALLY
Historic and Projection Data from outside sources (not UDAQ):

1995-2009: Utah Highway Performance Monitoring System and Traffic on Utah Highways at http://www.udot.utah.gov/main/f?p=100:pg:0:::V,T:,530 (Appendix 51)

UDAQ's Projection Calculations:
2010-2050: Growth is based on population.

TABLE 173: CUTBACK ASPHALT USAGE (Annual tons)
Historic and Projection Data from outside sources (not UDAQ):
2008: Amount of Cutback Asphalt used in Utah is from a survey by the "Asphalt Institute." (Appendix 7)

UDAQ's Projection Calculations:
1995-2007, 2009-2050: Amount of cutback asphalt used is based on the change in lane-miles.

TABLE 174: EMULSIFIED ASPHALT USAGE (Annual tons)
Historic and Projection Data from outside sources (not UDAQ):
2008: Amount of Emulsified Asphalt used in Utah is from a survey by the "Asphalt Institute." (Appendix 7)

UDAQ's Projection Calculations:
1995-2007, 2009-2050: Amount of cutback asphalt used is based on the change in lane-miles.

TABLE 175: SAND & GRAVEL - USE SCC 2270002000 FOR CO (sources not reported as point sources)
Historic and Projection Data from outside sources (not UDAQ):
2008: Inventory data from sand and gravel sources. (Appendix 52)

UDAQ's Projection Calculations:
2002-2007, 2009-2050: Emissions calculated using the mining employment growth.

TABLE 176: SAND AND GRAVEL - CO
Historic and Projection Data from outside sources (not UDAQ):
2008: Inventory data from sand and gravel sources. (Appendix 52)

UDAQ's Projection Calculations:
2002-2007, 2009-2050: Emissions calculated using the mining employment growth.

TABLE 177: NEI - SAND & GRAVEL - USE SCC 2270002000 FOR NOx (sources not reported as point sources)
Historic and Projection Data from outside sources (not UDAQ):
2008: Inventory data from sand and gravel sources. (Appendix 52)

UDAQ's Projection Calculations:
2002-2007, 2009-2050: Emissions calculated using the mining employment growth.

TABLE 178: SAND & GRAVEL - NOx
Historic and Projection Data from outside sources (not UDAQ):
2008: Inventory data from sand and gravel sources. (Appendix 52)

UDAQ's Projection Calculations:
2002-2007, 2009-2050: Emissions calculated using the mining employment growth.

TABLE 179: SAND & GRAVEL - USE SCC 30502501 FOR PM10 (sources not reported as point sources)
Historic and Projection Data from outside sources (not UDAQ):
2008: Inventory data from sand and gravel sources. (Appendix 52)

UDAQ's Projection Calculations:
2002-2007, 2009-2050: Emissions calculated using the mining employment growth.

TABLE 180: SAND & GRAVEL - PM10
Historic and Projection Data from outside sources (not UDAQ):
2008: Inventory data from sand and gravel sources. (Appendix 52)

UDAQ's Projection Calculations:
2002-2007, 2009-2050: Emissions calculated using the mining employment growth.

TABLE 181: SAND & GRAVEL - USE SCC 30502501 FOR PM2.5 (sources not reported as point sources)
Historic and Projection Data from outside sources (not UDAQ):
2008: Inventory data from sand and gravel sources. (Appendix 52)

UDAQ's Projection Calculations:
2002-2007, 2009-2050: Emissions calculated using the mining employment growth.

TABLE 182: SAND & GRAVEL - PM2.5
Historic and Projection Data from outside sources (not UDAQ):
2008: Inventory data from sand and gravel sources. (Appendix 52)

UDAQ's Projection Calculations:
2002-2007, 2009-2050: Emissions calculated using the mining employment growth.

TABLE 183: SAND & GRAVEL - USE SCC 2270002000 FOR SOx (sources not reported as point sources)
Historic and Projection Data from outside sources (not UDAQ):
2008: Inventory data from sand and gravel sources. (Appendix 52)

UDAQ's Projection Calculations:
2002-2007, 2009-2050: Emissions calculated using the mining employment growth.

TABLE 184: SAND & GRAVEL - SOx
Historic and Projection Data from outside sources (not UDAQ):
2008: Inventory data from sand and gravel sources. (Appendix 52)

UDAQ's Projection Calculations:
2002-2007, 2009-2050: Emissions calculated using the mining employment growth.

TABLE 185: SAND & GRAVEL - USE SCC 2270002000 FOR VOC (sources not reported as point sources)
Historic and Projection Data from outside sources (not UDAQ):
2008: Inventory data from sand and gravel sources. (Appendix 52)

UDAQ's Projection Calculations:
2002-2007, 2009-2050: Emissions calculated using the mining employment growth.

TABLE 186: SAND & GRAVEL - VOC
Historic and Projection Data from outside sources (not UDAQ):
2008: Inventory data from sand and gravel sources. (Appendix 52)

UDAQ's Projection Calculations:
2002-2007, 2009-2050: Emissions calculated using the mining employment growth.

TABLE 187: US ARCHITECTURAL COATINGS
Historic and Projection Data from outside sources (not UDAQ):
1995-1999: No data.
2006-2008: Data is from the US Census Bureau. (Appendix 53)

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in population.

TABLE 188: US ARCHITECTURAL COATINGS EXTERIOR SOLVENT TYPE
Historic and Projection Data from outside sources (not UDAQ):
1995-1999: No data.
2006-2008: Data is from the US Census Bureau. (Appendix 53)

UDAQ's Projection Calculations:
2008-2050: Calculation made using the percentage of change in population.

TABLE 189: US ARCHITECTURAL COATINGS INTERIOR SOLVENT TYPE
Historic and Projection Data from outside sources (not UDAQ):
1995-1999: No data.
2006-2008: Data is from the US Census Bureau. (Appendix 53)

UDAQ's Projection Calculations:
2008-2050: Calculation made using the percentage of change in population.

TABLE 190: US ARCHITECTURAL COATINGS LACQUERS
Historic and Projection Data from outside sources (not UDAQ):
1995-1999: No data.
2006-2008: Data is from the US Census Bureau. (Appendix 53)

UDAQ's Projection Calculations:
2008-2050: Calculation made using the percentage of change in population.

TABLE 191: US ARCHITECTURAL COATINGS N.S.K.
Historic and Projection Data from outside sources (not UDAQ):
1995-1999: No data.
2006-2008: Data is from the US Census Bureau. (Appendix 53)

UDAQ's Projection Calculations:
2008-2050: Calculation made using the percentage of change in population.

TABLE 192: US ARCHITECTURAL COATINGS ARCHITECTURAL SOLVENT TOTAL (MILLIONS OF GALLONS)
Historic and Projection Data from outside sources (not UDAQ):
1995-1999: No data.
2006-2008: Data is from the US Census Bureau. (Appendix 53)

UDAQ's Projection Calculations:
2008-2050: Calculation made using the percentage of change in population.

TABLE 193: US ARCHITECTURAL COATINGS ARCHITECTURAL EXTERIOR WATER TYPE (MILLIONS OF GALLONS)
Historic and Projection Data from outside sources (not UDAQ):
1995-1999: No data.
2006-2008: Data is from the US Census Bureau. (Appendix 53)

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in population.

TABLE 194: US ARCHITECTURAL COATINGS ARCHITECTURAL INTERIOR WATER TYPE (MILLIONS OF GALLONS)
Historic and Projection Data from outside sources (not UDAQ):
1995-1999: No data.
2006-2008: Data is from the US Census Bureau. (Appendix 53)

UDAQ's Projection Calculations:
2008-2050: Calculation made using the percentage of change in population.

TABLE 195: US ARCHITECTURAL COATINGS ARCHITECTURAL WATER TYPE TOTAL (MILLIONS OF GALLONS)
Historic and Projection Data from outside sources (not UDAQ):
1995-1999: No data.
2006-2008: Data is from the US Census Bureau. (Appendix 53)

UDAQ's Projection Calculations:
2008-2050: Calculation made using the percentage of change in population.

TABLE 196: LANDFILL POINT SOURCES VOCS
Historic and Projection Data from outside sources (not UDAQ):
2008: A query is made of all Landfill point sources in domain. (Appendix 54)

UDAQ's Projection Calculations:
2007, 2009-2050: Calculation made using the percentage of change in population.

TABLE 197: LANDFILL POINT SOURCES PM10
Historic and Projection Data from outside sources (not UDAQ):
2008: A query is made of all Landfill point sources in domain. (Appendix 54)

UDAQ's Projection Calculations:
2007, 2009-2050: Calculation made using the percentage of change in population.

TABLE 198: LANDFILL POINT SOURCES PM25
Historic and Projection Data from outside sources (not UDAQ):
2008: A query is made of all Landfill point sources in domain. (Appendix 54)

UDAQ's Projection Calculations:
2007, 2009-2050: Calculation made using the percentage of change in population.

TABLE 199: POLLUTANT CODES (NEI)

TABLE 200, NAICS CODES

TABLE 1: UTAH HUMAN POPULATION

Historic and Projection Data from outside sources (not UDAQ):

1995-2008: Data is supplied by Governor's Office of Planning & Budget; State of Utah Economic and Demographic Research Database, Utah Population

2010 - 2050: Data is supplied by Governor's Office of Planning & Budget, "2008 Baseline Projections." (Appendix 2)

TABLE 2: UTAH HUMAN POPULATION PERCENT OF GROWTH

1995-2050: Percentage of growth is calculated using Table 1.

TABLE 3: U.S.A. HUMAN POPULATION

Historic and Projection Data from outside sources (not UDAQ):

2000-2009: Data is supplied by the U.S. Dept. of Census, "Table 1: Annual Estimates of the Resident Population for the United States, Regions, States, and

2011 - 2050: Data is supplied by the U.S. Dept. of Census, "Table 1: Projections of the Population and Components of Change for the United States: 2010-2050."

TABLE 4: AGRICULTURAL EMPLOYMENT (jobs)

Historic and Projection Data from outside sources (not UDAQ):

2002 - 2009: Data is supplied by Regional Economic Information System, Bureau of Economic Analysis, "Employment by Industry." (Appendix 5)

2021 - 2050: Data is supplied by Utah Governor's Office of Planning & Budget, "Employment by Area and Industry Detailed Industries," see internet site

UDAQ's Projection Calculations:

2010-2019: Per instructions from the Bureau of Economic Analysis, interpolation was used between 2009 and 2020. (2.b iii Appendix 1)

TABLE 5: AGRICULTURAL EMPLOYMENT PERCENT GROWTH

1995-2050: Percentage of growth is calculated using Table 4.

TABLE 6: MANUFACTURING EMPLOYMENT (jobs)

2002 - 2009: Data is supplied by Regional Economic Information System, Bureau of Economic Analysis, " Employment by Industry." (Appendix 5) Interpolation was

2021 - 2050: Data is supplied by Utah Governor's Office of Planning & Budget, "Employment by Area and Industry Detailed Industries," see internet site

UDAQ's Projection Calculations:

2010-2019: Per instructions from the Bureau of Economic Analysis, interpolation was used between 2009 and 2020. (2.b iii Appendix 1)

TABLE 7: MANUFACTURING EMPLOYMENT GROWTH RATE

1995-2050: Percentage of growth is calculated using Table 6.

TABLE 8: CONSTRUCTION EMPLOYMENT (jobs)

Historic and Projection Data from outside sources (not UDAQ):

2002 - 2009: Data is supplied by Regional Economic Information System, Bureau of Economic Analysis, "Employment by Industry." (Appendix 5) Missing data

2020-2050: Data is supplied by Utah Governor's Office of Planning & Budget, "Employment by Area and Industry Detailed Industries," File "Employment by Area

UDAQ's Projection Calculations:

2010-2019: Per instructions from the Bureau of Economic Analysis, interpolation was used between 2009 and 2020. (2.b iii Appendix 1)

TABLE 9: CONSTRUCTION EMPLOYMENT GROWTH RATES

UDAQ's Calculations:

1995-2050: Percentage of growth is calculated using Table 8.

TABLE 10: TRANSPORTATION EMPLOYMENT (jobs)

Historic and Projection Data from outside sources (not UDAQ):

2002 - 2009: Data is supplied by Regional Economic Information System, Bureau of Economic Analysis, " Employment by Industry." (Appendix 5) Interpolation was

2020-2050: Data is supplied by Utah Governor's Office of Planning & Budget, "Employment by Area and Industry Detailed Industries," File "Employment by Area

UDAQ's Projection Calculations:

2010-2019: Per instructions from the Bureau of Economic Analysis, interpolation was used between 2009 and 2020. (2.b iii Appendix 1)

TABLE 11: TRANSPORTATION EMPLOYMENT GROWTH RATES
UDAQ's Calculations:
1995-2050: Percentage of growth is calculated using Table 10.

TABLE 12: MINING EMPLOYMENT (jobs)
Historic and Projection Data from outside sources (not UDAQ):
2002 - 2009: Data is supplied by Regional Economic Information System, Bureau of Economic Analysis, " Employment by Industry." (Appendix 5) Interpolation was
2020-2050: Data is supplied by Utah Governor's Office of Planning & Budget, "Employment by Area and Industry Detailed Industries." File "Employment by Area

UDAQ's Projection Calculations:
2010-2019: Per instructions from the Bureau of Economic Analysis, interpolation was used between 2009 and 2020. (2.b iii Appendix 1)

TABLE 13: MINING EMPLOYMENT GROWTH RATES
UDAQ's Calculations:
1995-2050: Percentage of growth is calculated using Table 12.

TABLE 14: UTAH DEGREASING EMPLOYEES (331///, 332///, 333///, 334///, 335///, 336///, 337///, 339///, 441///, 483///, 484///, 485///, 488///, 8111//, 8112//)
Historic and Projection Data from outside sources (not UDAQ):
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008

UDAQ's Projection Calculations:
2007-2050: grown by population growth.

TABLE 15: UTAH NEW AUTOMOTIVE EMPLOYEES (4411, 4412, 81112)
Historic and Projection Data from outside sources (not UDAQ):
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008

UDAQ's Projection Calculations:
2007-2050: grown by population growth.

TABLE 16: METAL FURNITURE (NAICS 3372124, 337214, 337127, 339111, and 337215)
Historic and Projection Data from outside sources (not UDAQ):
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008

UDAQ's Projection Calculations:
2007-2050: grown by manufacturing employment growth.

TABLE 17: WOOD FURNITURE MANUFACTURING EMPLOYEES (NAICS 337110, 337121,337122, 337127, 337129, 337211, 337212, 337215, 339111)
Historic and Projection Data from outside sources (not UDAQ):
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008

UDAQ's Projection Calculations:
2007-2050: grown by manufacturing employment growth.

TABLE 18: METAL CONTAINERS MANUFACTURING EMPLOYEES (NAICS 33243/)
Historic and Projection Data from outside sources (not UDAQ):
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008

UDAQ's Projection Calculations:
2007-2050: grown by manufacturing employment growth.

TABLE 19: MACHINERY AND EQUIPMENT (NAICS 3331//, 3332//, 3333//, AND 33341/)
Historic and Projection Data from outside sources (not UDAQ):
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008

UDAQ's Projection Calculations:
2007-2050: grown by manufacturing employment growth.

Table 20: Appliances (NAICS 3352//)
Historic and Projection Data from outside sources (not UDAQ):
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008

UDAQ's Projection Calculations:
2007-2050: grown by manufacturing employment growth.

TABLE 21: OTHER TRANSPORTATION EQUIPMENT MANUFACTURING EMPLOYEES (NAICS 3361//, 3362//, AND 3363//)
Historic and Projection Data from outside sources (not UDAQ):
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008

UDAQ's Projection Calculations:
2007-2050: grown by manufacturing employment growth.

TABLE 22: SHEET, STRIP, AND COIL MANUFACTURING EMPLOYEES (NAICS 332812, 339911, 339912, AND 339914)
Historic and Projection Data from outside sources (not UDAQ):
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008

UDAQ's Projection Calculations:
2007-2050: grown by manufacturing employment growth.

TABLE 23: FACTORY FINISHED WOOD PRODUCTS MANUFACTURING EMPLOYEES (NAICS 321///)
Historic and Projection Data from outside sources (not UDAQ):
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008

UDAQ's Projection Calculations:
2007-2050: grown by manufacturing employment growth.

TABLE 24: ELECTRICAL MANUFACTURING EMPLOYEES (NAICS 331319, 331422, 331491, 335921, 335929, AND 335311)
Historic and Projection Data from outside sources (not UDAQ):
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008

UDAQ's Projection Calculations:
2007-2050: grown by manufacturing employment growth.

TABLE 25: OTHER PRODUCT COATINGS (NAICS 339/// AND 3369//)
Historic and Projection Data from outside sources (not UDAQ):
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008

UDAQ's Projection Calculations:
2007-2050: grown by manufacturing employment growth.

TABLE 26: MARINE COATINGS (NAICS 3366// AND 488390)
Historic and Projection Data from outside sources (not UDAQ):

2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008

UDAQ's Projection Calculations:
2007-2050: grown by manufacturing employment growth.

TABLE 27: PAPER, FILM, AND FOIL (NAICS 322211, 322212, 322219, 3222220, 322221, 322222, 322223, 322225, 322226, 322230, and 322299)
Historic and Projection Data from outside sources (not UDAQ):
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008
"State of Utah Workforce Services" - "Converted Paper" (NAICS 222299) employment, previously unaccounted for, adjusted for companies reporting range of employees. Employment data sourced from State of Utah Workforce Services 2009 C
UDAQ's Projection Calculations:
2007-2050: grown by manufacturing employment growth.

TABLE 28: RAILROAD COATINGS (NAICS 3365//)
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008

UDAQ's Projection Calculations:
2007-2050: grown by manufacturing employment growth.

TABLE 29: AIRCRAFT COATINGS (NAICS 3364//)
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008

UDAQ's Projection Calculations:
2007-2050: grown by manufacturing employment growth.

TABLE 30: GRAPHIC ART EMPLOYMENT (NAICS 322211, 322212, 322213, 322214, 322222, 322223, 322224, 322226, 322231, 322232, 322291, 322299,
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008

UDAQ's Projection Calculations:
2007-2050: grown by population growth.

TABLE 31: LAND AREA (km2)
Historic and Projection Data from outside sources (not UDAQ):
UDAQ's Patrick Barickman supplied these values by county. (Appendix 8)

UDAQ's Projection Calculations:
Data is held constant for all years.

TABLE 32: STATEWIDE MEAN AMBIENT AIR TEMPERATURES (degrees Fahrenheit)
Historic and Projection Data from outside sources (not UDAQ):
1995-2007: Data is from the National Weather Service - NWS Salt Lake City, "SLC Annual Mean Temperature," see internet site

UDAQ's Projection Calculations:
2008-2050: Temperatures are calculated using averaging.

TABLE 33B: SIP TEMPERATURE MAX (Annual)
Historic and Projection Data from outside sources (not UDAQ):
2006, 2007, 2008, and 2009 episode temperature data from Utah State University GIS Climate Search Data base. See

UDAQ's Projection Calculations:
2010-2050: Temperatures are calculated using averaging.

TABLE 34B: SIP TEMPERATURE MIN (MIN)

Historic and Projection Data from outside sources (not UDAQ):
2006, 2007, 2008, 2009, and 2010 episode temperature data from Utah State University GIS Climate Search Data base. See

UDAQ's Projection Calculations:
2011-2050: Temperatures are calculated using averaging.

TABLE 35: TAXABLE GASOLINE & GASOHOL (gallons)
Historic and Projection Data from outside sources (not UDAQ):
1995-2009: Data is supplied by the Utah State Tax Commission (UTC), 'Utah Motor Fuel Report." UDAQ's current UTC contact is Lynette Goodman, (801)297-

UDAQ's Projection Calculations:
2010-2050: Projections are made using the change in USA gasoline (see Table 51).

TABLE 36: GOVERNMENT GASOLINE & GASOHOL (gallons)
Historic and Projection Data from outside sources (not UDAQ):
1995-2009: Data is supplied by the Utah State Tax Commission (UTC), 'Utah Motor Fuel Report." UDAQ's current UTC contact is Lynette Goodman, (801)297-

UDAQ's Projection Calculations:
2010-2050: Projections are made using the change in US gasoline (see Table 51)

TABLE 37: US JET FUEL AND AVIATION CONSUMPTION (millions of gallons)
Historic and Projection Data from outside sources (not UDAQ):
2000-2009: Federal Aviation Administration's "FAA Aerospace Forecast Fiscal Years 2010-2030," Table 22 (Updated). (Appendix 13)
2010-2030: Federal Aviation Administration's "FAA Aerospace Forecast Fiscal Years 2010-2030," Table A-2 (Updated). (Appendix 13)

UDAQ's Projection Calculations:
2031-2050: Projections are made using the change in population.

TABLE 38: US JET FUEL AND AVIATION GASOLINE FUEL CONSUMPTION (Percent of change)
Historic and Projection Data from outside sources (not UDAQ):
2000-2009: Federal Aviation Administration's "FAA Aerospace Forecast Fiscal Years 2010-2030," Table 22 (Updated). (Appendix 13)
2010-2030: Federal Aviation Administration's "FAA Aerospace Forecast Fiscal Years 2010-2030," Table A-2 (Updated). (Appendix 13)

UDAQ's Projection Calculations:
2031-2050: Projections are made using the change in population.

TABLE 39: UTAH TAXABLE AVIATION FUEL (gallons)
Historic and Projection Data from outside sources (not UDAQ):
1995-2009: Data is supplied by the Utah State Tax Commission (UTC), 'Utah Aviation Fuel Report." UDAQ's current UTC contact is Lynette Goodman, (801)297-

UDAQ's Projection Calculations:
2010-2030: Projections are calculated using the projected percent of change in aviation gasoline consumption in "FAA Aerospace Forecast Fiscal Years 2010-
2031-2050: Projections are made using the change in US consumption of fuel (see Table 38).

TABLE 40: UTAH GOVERNMENT AVIATION FUEL (gallons)
Historic and Projection Data from outside sources (not UDAQ):
1995-2009: Data is supplied by the Utah State Tax Commission (UTC), 'Utah Aviation Fuel Report." UDAQ's current UTC contact is Lynette Goodman, (801)297-

UDAQ's Projection Calculations:
2010-2030: Projections are calculated using the projected percent of change in jet fuel consumption in "FAA Aerospace Forecast Fiscal Years 2010-2030" Table
2031-2050: Projections are made using the change in US consumption of fuel (see Table 38).

TABLE 41: UTAH AVIATION FUEL (barrels)

Historic and Projection Data from outside sources (not UDAQ):

1995-2008: The amount of aviation gasoline and jet fuel used during the year is from the State of Utah, Natural Resources, Office of Energy & Resource Planning

UDAQ's Projection Calculations:

2009-2030: Projections are calculated using the projected percent of change in jet fuel consumption in "FAA Aerospace Forecast Fiscal Years 2010-2030" Table

2031-2050: Projections are made using the change in US consumption of fuel (see Table 38).

TABLE 42: UTAH GOVERNMENT AVIATION FUEL (gallons)

Historic and Projection Data from outside sources (not UDAQ):

1995-2008: The amount of aviation gasoline and jet fuel used during the year is from the State of Utah, Natural Resources, Office of Energy & Resource Planning

UDAQ's Projection Calculations:

2009-2030: Projections are calculated using the projected percent of change in jet fuel consumption in "FAA Aerospace Forecast Fiscal Years 2010-2030" Table

2031-2050: Projections are made using the change in US consumption of fuel (see Table 38).

TABLE 43: FORECAST DOMESTIC AND INTERNATIONALLY AVAILABLE SEAT MILES PERCENTAGE OF CHANGE

UDAQ's Projection Calculations:

2009-2030: Projections are calculated using available seat miles from Federal Aviation Administration's "FAA Aerospace Forecast Fiscal Years 2010-2030," Page

2031-2050: Projections based on population growth.

TABLE 44: AIRCRAFT - ALL AIRPORTS (operations)

Historic and Projection Data from outside sources (not UDAQ):

2004-2006: Data from the Utah Department Transportation Aeronautical Operations "Utah Continuous Airport System Plan 2007." Hill is from 2005 Inventory.

2007-2008: Data from the Mobile Section of the Utah Division of Air Quality. (Appendix 16)

UDAQ's Projection Calculations:

2009-2030: Projections are calculated using the projected percent of change in domestic and international seat miles in "FAA Aerospace Forecast Fiscal Years

2006-2008: An annual increase of 2% is used for airports that do not have projection information. Interpolation is used for airports that have projections.

2031-2050: An annual increase of 2% is used.

TABLE 45: AIRCRAFT BY COUNTY (operations)

Historic and Projection Data from outside sources (not UDAQ):

1995-2050: Add data from Table 44 by county.

TABLE 46: AIRCRAFT BY COUNTY - (operations at airports with aviation gasoline refueling)

Historic and Projection Data from outside sources (not UDAQ):

1995-2050: Add data from Table 44 by county. Fuel availability is from the US Department of Transportation, Federal Aviation Administration's "Airport Master

TABLE 47: AIRCRAFT BY COUNTY - (operations at airports with jet fuel refueling)

Historic and Projection Data from outside sources (not UDAQ):

1995-2050: Add data from Table 44 by county. Fuel availability is from the US Department of Transportation, Federal Aviation Administration's "Airport Master

TABLE 48: REFUELING OF ON ROAD VEHICLES (NOT USED FOR SIP)

UDAQ's Calculations:

Not used for SIP.

TABLE 49: SUM OF U.S.A.'s GASOLINE FOR VEHICLES (thousand gallons)

Historic and Projection Data from outside sources (not UDAQ):

2003-2008: Data is supplied by "Table C1. Estimated Consumption of Vehicle Fuels in the United States, by Fuel Type, 2003-2007" and 2004-2008 from the US

UDAQ's Projection Calculations:

2009-2035: Calculation made using the "US Energy Information Administration Annual Energy Outlook 2010 Early Release Overview," Table 2 Energy
2036-2050: Annual gasoline change is assumed to be equal to annual change in USA human population as listed in Table 3 above.

TABLE 50: SUM OF U.S.A.'S GASOLINE FOR VEHICLES (quadrillion Btu)
Historic and Projection Data from outside sources (not UDAQ):
2006: Data from "US Energy Information Administration Annual Energy Outlook 2009," Table 10 Total United States.

UDAQ's Projection Calculations:
2007-2035: Calculation made using the "US Energy Information Administration Annual Energy Outlook 2010 Early Release," Table 2 Energy Consumption by
2036-2050: Annual gasoline change is assumed to be equal to annual change in USA human population as listed in Table 3 above.

TABLE 51: SUM OF U.S.A.'S GASOLINE FOR VEHICLES (% if change)
UDAQ's Projection Calculations:
2007-2035: Calculation made using the "US Energy Information Administration Annual Energy Outlook 2010 Early Release," Table 2 Energy Consumption by
2036-2050: Annual gasoline change is assumed to be equal to annual change in USA human population as listed in Table 3 above.

TABLE 52: HOUSES HEATING WITH COAL
Historic and Projection Data from outside sources (not UDAQ):
2000: Data is from the Governor's Office of Planning and Budget internet web page, http://www.governor.utah.gov/dea/census/Countiessf3profiles.htm, "Table DP-

UDAQ's Calculations:
1995-1999, 2001-2050: Data is constant for all years.

TABLE 53: RESIDENTIAL & COMMERCIAL COAL (tons)
Historic and Projection Data from outside sources (not UDAQ):
1995-2009: Data is from the State of Utah, Natural Resources, "Annual Review and Forecast of Utah Coal Production and Distribution 2008," Table A4.

UDAQ's Projection Calculations:
2010-2030: They are calculated using the percent of change of coal consumption of nonelectric utilities. Data from Natural Resources, "Annual Review and
2032 - 2050: They are calculated using the percent of change of US population.

TABLE 54: US COAL CONSUMPTION (tons)
Historic and Projection Data from outside sources (not UDAQ):
1995-2030: Data from Natural Resources, "Annual Review and Forecast of Utah Coal Production and Distribution 2008," Table A3. U.S. Coal consumption by

UDAQ's Projection Calculations:
2032 - 2050: They are calculated using the percent of change of US population.

TABLE 55: PERCENT OF CHANGE IN US COAL CONSUMPTION (tons)
Historic and Projection Data from outside sources (not UDAQ):
1995-2030: Percentage calculated from data from Natural Resources, "Annual Review and Forecast of Utah Coal Production and Distribution 2008," Table A3.

UDAQ's Projection Calculations:
2032 - 2050: Percentage used is the annual growth 2008-2035 percentage from US Energy Information Administration's "Annual Energy Outlook 2010 with

TABLE 56: COMMERCIAL POINT SOURCES COAL BURNED
UDAQ's Calculations:
2005-2008: Data from UDAQ's inventory database and company workbooks. All sources except schools assumed to be in electrical utilities or other industrial

UDAQ's Projection Calculations:
2009-2030: They are calculated using the percent of change of consumption from Table 55 above. Data is from Natural Resources, "Annual Review and Forecast
2032 - 2050: Percentage used is the annual growth 2008-2035 percentage from US Energy Information Administration's "Annual Energy Outlook 2010 with

TABLE 57: US PETROLEUM PRODUCTS CONSUMPTION

Historic and Projection Data from outside sources (not UDAQ):

2006: Data is from the Energy Information Administration "Annual Energy Outlook 2009," Table A2 Energy Consumption by Sector and source."

2007-2035: Data is from the Energy Information Administration "Annual Energy Outlook 2010," Table A2. Energy Consumption by Sector and Source." (Appendix

UDAQ's Projection Calculations:

2007-2035: Asphalt and Road Oil, Aviation Gasoline, Lubricants, and Other Petroleum Products calculated using Utah data for percentage of other petroleum. See

2037 - 2050: Calculations made by using percentage of Utah population growth.

TABLE 58: CALCULATION OF ASPHALT, AVIATION GASOLINE, AND LUBRICANTS INCLUDED IN OTHER PETROLEUM PRODUCTS (See Table 60)

TABLE 59: US PETROLEUM CONSUMPTION PERCENTAGE CHANGE BY SECTOR FORECAST (quadrillion Btu)

UDAQ's Calculations:

1995-2050: Percentage of growth is calculated using Table 57.

TABLE 60: PETROLEUM PRODUCTS CONSUMPTION STATEWIDE

Historic and Projection Data from outside sources (not UDAQ):

1995-2008: Data is from the State of Utah, Natural Resources, Office of Energy & Resource Planning (ERP), Internet website

UDAQ's Projection Calculations:

2009-2050: The amount of consumption is changed by the sector forecast. (see Table 59)

TABLE 61: PERCENT OF GROWTH OF PETROLEUM PRODUCTS CONSUMPTION STATEWIDE

UDAQ's Projection Calculations:

1995-2050: Calculations are made using Table 60.

TABLE 62: TOTAL PETROLEUM PRODUCTS BY FUEL EXCLUDING PRODUCTS NOT USED BY RESIDENTIAL SECTOR

Historic and Projection Data from outside sources (not UDAQ):

1995-2008: Data is from the State of Utah, Natural Resources, Office of Energy & Resource Planning (ERP), Internet website

UDAQ's Projection Calculations:

2009-2050: The amount of consumption each year is based on the forecast US energy consumption growth rate (see Table 60).

TABLE 63: PERCENTAGE OF PETROLEUM PRODUCTS BY FUEL EXCLUDING PRODUCTS NOT USED BY RESIDENTIAL SECTOR STATEWIDE

UDAQ's Calculations:

1995-2050: Percentage of growth is calculated using Table 62.

TABLE 64: PERCENTAGE OF GROWTH OF ENERGY CONSUMPTION BY SECTOR

Historic and Projection Data from outside sources (not UDAQ):

2007-2035: Data from Energy Information Administration, "Annual Energy Outlook 2010, Early Release Overview" Table 17. Projections of energy consumption by

UDAQ's Projection Calculations:

2009-2050: The amount of consumption each year is based on the forecast US energy consumption growth rate (see Table 60).

TABLE 65: CONSUMPTION OF PETROLEUM PRODUCTS IN UTAH BY END USE (thousand barrels) (excluded industrial, transportation, and electric

Historic and Projection Data from outside sources (not UDAQ):

1995-2008: Data is from the State of Utah, Natural Resources, Office of Energy & Resource Planning (ERP), Internet website

UDAQ's Projection Calculations:

2009-2030: Calculations made using data from Energy Information Administration, "Annual Energy Outlook 2009," Table 17. Projections of energy consumption by

TABLE 66: PERCENT OF CONSUMPTION OF PETROLEUM PRODUCTS IN UTAH BY END USE (thousand barrels)
UDAQ's Projection Calculations:
1995-2050: Percentage derived from Table 65.

TABLE 67: RESIDENTIAL DISTILLATE FUEL OIL (thousand barrels)
UDAQ's Projection Calculations:
1995-2050: The amount of fuel oil is calculated by multiplying the amount of petroleum products consumed by residential (Table 62) by the percentage of

TABLE 68: COMMERCIAL DISTILLATE OIL (thousand barrels)
UDAQ's Projection Calculations:
1995-2050: The amount of fuel oil is calculated by multiplying the amount of petroleum products consumed by commercial (Table 62) by the percentage of

TABLE 69: COMMERCIAL FUEL OIL USED BY POINT SOURCES (thousand barrels)
Historic and Projection Data from outside sources (not UDAQ):
2008: A query was made of all distillate, diesel, and fuel oil reported to UDAQ's Point Source Inventory for 2008. The query occurred after reports were received,

UDAQ's Projection Calculations:
1996-2007: The amount of fuel oil burned by sources was estimated using the growth percentages in Table 64.
2010 -2050: The amount of fuel oil burned by sources was estimated using the growth percentages in Table 64.

TABLE 70: RESIDENTIAL PERCENTAGE OF KEROSENE AND LPG
UDAQ's Calculations:
1995-2050: Percentage is calculated using Table 65.

TABLE 71: COMMERCIAL PERCENTAGE OF KEROSENE AND LPG
UDAQ's Calculations:
1995-2050: Percentage is calculated using Table 65.

TABLE 72: KEROSENE USED BY POINT SOURCES (thousand barrels)
1997 - 2008: A query is made of all "industrial kerosene" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received,

UDAQ's Projection Calculations:
2010 -2050: The amount of kerosene burned by sources was estimated using the growth percentages in Table 64.

TABLE 73: HOUSE HEATING - FUEL OIL, KEROSENE, ETC.
Historic and Projection Data from outside sources (not UDAQ):
2000: Data is from the Governor's Office of Planning and Budget internet web page, http://www.governor.utah.gov/dea/census/Countiessf3profiles.htm, "Table DP-

UDAQ's Calculations:
1995-1999, 2001-2050: Data is held constant for all years.

TABLE 74: KEROSENE (thousand barrels)
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: The amount of kerosene used during the year is from the State of Utah, Natural Resources, Office of Energy & Resource Planning (ERP), Internet

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the US energy consumption average annual percentage growth.

TABLE 75: HOUSE HEATING - BOTTLED, TANK, LPG (number of units)
Historic and Projection Data from outside sources (not UDAQ):
2000: Data is from the Governor's Office of Planning and Budget internet web page, http://www.governor.utah.gov/dea/census/Countiessf3profiles.htm, "Table DP-

UDAQ's Calculations:
1995-1999, 2001-2050: Data is held constant for all years.

TABLE 76: LPG PETROLEUM PRODUCTS (thousand barrels)
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: The amount of LPG used during the year is from the Office of Energy & Resource Planning, "Utah Energy Statistical Abstract" Table 3.18

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using US average annual percentage growth of energy consumption.

TABLE 77: LPG BURNED BY POINT SOURCES (thousand barrels)
Historic and Projection Data from outside sources (not UDAQ):
2007-2008: A query is made of all "industrial LPG" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are received,

UDAQ's Projection Calculations:
1995-2006: Emissions calculated using the petroleum usage growth rate and the actual 2007 usage.
2010 -2050: The amount of LPG burned by sources was estimated using the growth percentages in Table 64.

TABLE 78: RESIDUAL FUEL
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: The amount of residual oil used during the year is from the Office of Energy & Resource Planning, "Utah Energy Statistical Abstract," Table 3.18.

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the energy consumption by sector growth rate.

TABLE 79: RESIDENTIAL RESIDUAL FUEL
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: The amount of residual oil used during the year is from the Office of Energy & Resource Planning, "Utah Energy Statistical Abstract" Table 3.18 in

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the energy consumption by sector growth rate.

TABLE 80: COMMERCIAL RESIDUAL FUEL
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: The amount of residual oil used during the year is from the Office of Energy & Resource Planning, "Utah Energy Statistical Abstract," Table 3.18 in

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the energy consumption by sector growth rate.

TABLE 81: COMMERCIAL RESIDUAL FUEL OIL USED BY POINT SOURCES (thousand barrels)
1996-2008: A query is made of all residual and heavy fuel oil reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are

UDAQ's Projection Calculations:
2010 -2050: The amount of residual fuel burned by sources was estimated using the growth percentages in Table 64.

TABLE 82: NATURAL GAS, GSDTH CONSUMERS, ("General Service;" i.e., residential and small commercial), (DTh)
Historic and Projection Data from outside sources (not UDAQ):
2005-2008: Reports are from natural gas companies: "QUESTAR Corp" (~99.5%) and "UTAH GAS Company" (~0.5%). UTAH GAS was purchased by QUESTAR

UDAQ's Projection Calculations:
2009-2050: It is assumed that this data is somewhat related to the population in a given county, thus all other years are estimated or projected using the same

TABLE 83: NATURAL GAS, NONGSDTH CONSUMERS, ("Non-General Service," I.e., large commercial and industrial), (DTh)
Historic and Projection Data from outside sources (not UDAQ):
2005-2008: Reports are from natural gas companies: "QUESTAR Corp" (~99.5%) and "UTAH GAS Company" (~0.5%). UTAH GAS was purchased by QUESTAR

UDAQ's Projection Calculations:
2009-2050: It is assumed that this data is somewhat related to the population in a given county, thus all other years are estimated or projected using the same

TABLE 84: QUERY OF POINT SOURCE'S NATURAL GAS CONSUMPTION (million cubic feet)
Historic and Projection Data from outside sources (not UDAQ):
1996- 2008: A query is made of "actual natural gas consumption" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are

UDAQ's Projection Calculations:
2009-2050: All projections are calculated by percentage of manufacturing growth.

TABLE 85: U.S. HOUSE UNITS USING FIREPLACES WITH INSERTS FOR HEATING
Historic and Projection Data from outside sources (not UDAQ):
2005: Data is from the U.S. Department of Housing and Urban Development Office of Policy Development and Research's "American Housing Survey for the

UDAQ's Calculations:
1996 - 2004, 2006 - 2050: Data is held constant for all years.

TABLE 86: U.S. HOUSE UNITS USING FIREPLACES WITHOUT INSERTS FOR HEATING
Historic and Projection Data from outside sources (not UDAQ):
2005: Data is from the U.S. Department of Housing and Urban Development Office of Policy Development and Research's "American Housing Survey for the

UDAQ's Calculations:
1996 - 2004, 2006 - 2050: Data is held constant for all years.

TABLE 87: U.S. HOUSE UNITS USING FIREPLACES WITH INSERTS FOR AESTHETICS
Historic and Projection Data from outside sources (not UDAQ):
2005: Data is from the U.S. Department of Housing and Urban Development Office of Policy Development and Research's "American Housing Survey for the

UDAQ's Calculations:
1996 - 2004, 2006 - 2050: Data is held constant for all years.

TABLE 88: U.S. HOUSE UNITS USING FIREPLACES WITHOUT INSERTS FOR AESTHETICS
Historic and Projection Data from outside sources (not UDAQ):
2005: Data is from the U.S. Department of Housing and Urban Development Office of Policy Development and Research's "American Housing Survey for the

UDAQ's Calculations:
1996 - 2004, 2006 - 2050: Data is held constant for all years.

TABLE 89: U.S. HOUSE UNITS USING WOOD FUEL
Historic and Projection Data from outside sources (not UDAQ):
2005: Data is from the U.S. Department of Housing and Urban Development Office of Policy Development and Research's "American Housing Survey for the

UDAQ's Calculations:
1996 - 2004, 2006 - 2050: Data is held constant for all years.

TABLE 90: CORDS OF WOOD USED FOR HEATING IN UTAH
Historic and Projection Data from outside sources (not UDAQ):
1995-2007: Data is from the State of Utah, Natural Resources, Office of Energy & Resource Planning (ERP), Internet website

UDAQ's Calculations:
2008-2050: Estimates are made using the growth of US consumption of biomass (see Table 91).

TABLE 91: PERCENTAGE OF GROWTH OF CONSUMPTION OF BIOMASS FOR US (Quadrillion Btu)
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: The amount of wood used during the year is from the State of Utah, Natural Resources, Office of Energy & Resource Planning (ERP), Internet website
2020, 2030, and 2035: Energy Information Administration's "Annual Energy Outlook 2010, Early Release Overview," Table 1. Comparison of projections in the

UDAQ's Calculations:
2009-2019; 2021-2029; and 2030-2035: Calculations done by interpolation.
2031-2050: Estimations made by averaging.

TABLE 92: HOUSE HEATING - WOOD (number of units)
Historic and Projection Data from outside sources (not UDAQ):
2000: Data is from the Governor's Office of Planning and Budget internet web page, http://www.governor.utah.gov/dea/census/Countiessf3profiles.htm, "Table DP-

UDAQ's Calculations:
1995-1999, 2001-2050: Data is held constant for all years.

TABLE 93: PRESCRIBED AND WILD FIRES excluding AGRICULTURAL FIRES (acres burned)
Historic and Projection Data from outside sources (not UDAQ):
1995, 1996, 1997: Utah Dept. of Natural Resources, Division of Forestry, Fire & State Lands (FFSL) adds up the burning on state, federal, and private range and
1999: Beginning in 1999, Greg Zschaechner received all outside data (including any data from FFSL) and submitted burn data to UDAQ directly. (Appendix 32)
2003 and 2005: Data is from Greg Zschaechner of the Bureau of Land Management. (Appendix 32)
2008 - 2008: Data is from Dan Washington of the Bureau of Land Management. (Appendix 32)

UDAQ's Projection Calculations:
1997-1998: Estimates use the mean average of 3 known years, 1995, 1996, and 1999.
2006-2008: Actual Wildfire burned acreage - Prescribed fires are calculated by averaging previous amounts.
2000-2001, 2003-2004, and 2009-2050: Estimates are calculated by averaging all values previous to the cell.

TABLE 94: WILDFIRES (acres burned)
Historic and Projection Data from outside sources (not UDAQ):
1995, 2002, and 2005: Utah Dept. of Natural Resources, Division of Forestry, Fire & State Lands (FFSL) adds up the burning on state, federal, and private range
2006-2008: Data is from Dan Washington of the Bureau of Land Management. (Appendix 32)

UDAQ'S Projection Calculations:
2003-2004 and 2009-2050: Estimates are calculated by averaging wild and prescribed fire totals and breaking out wild and prescribed fires from this amount.

TABLE 95: PRESCRIBED FIRES (acres burned)
Historic and Projection Data from outside sources (not UDAQ):
1996 2002- 2005, 2008: Utah Dept. of Natural Resources, Division of Forestry, Fire & State Lands (FFSL) adds up the burning on state, federal, and private range

UDAQ'S Projection Calculations:
2006-2007, 2009-2050: Estimates are calculated by averaging previous amounts.

TABLE 96: REFUELING (tons/day) (Included in the Mobile emissions.)
Historic and Projection Data from EPA NONROAD 2004:
Included in Mobile emissions.

TABLE 97: WHEAT (harvested acres)

Historic and Projection Data from outside sources (not UDAQ):
1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food,

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 98: WHEAT (planted acres)
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food,

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 99: BARLEY (harvested acres)
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food,

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 100: BARLEY (planted acres)
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food,

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 101: CORN (harvested acres)
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food,

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 102: CORN (planted acres)
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food,

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 103: OATS (harvest acres)
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food,

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 104: OATS (planted acres)
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food,

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 105: HAY (harvested acres)
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food,

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 106: DRY BEANS (Planted Acres)
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food,

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 107: DRY BEANS (Harvested Acres)
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food,

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 108: POTATOES (Planted Acres)
Historic and Projection Data from outside sources (not UDAQ):
2003: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual

UDAQ's Projection Calculations:
2004-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 109: POTATOES (Harvested Acres)
Historic and Projection Data from outside sources (not UDAQ):
2003: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual

UDAQ's Projection Calculations:
2004-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 110: ONIONS (Planted Acres)
Historic and Projection Data from outside sources (not UDAQ):
2003: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual

UDAQ's Projection Calculations:
2005-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 111: ONIONS (Harvested Acres)
Historic and Projection Data from outside sources (not UDAQ):
2003: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food, Annual

UDAQ's Projection Calculations:
2005-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 112: COMMERCIAL APPLES (Bearing Acres)
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food,

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 113: TART CHERRIES (Bearing Acres)
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food,

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 114: SWEET CHERRIES (Bearing Acres)
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food,

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 115: PEARS (Bearing Acres)
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food,

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 116: PEACHES (Bearing Acres)
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food,

UDAQ's Projection Calculations:
2009-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 117: CATTLE AND COWS FOR MILK AND MEAT (head count)
Historic and Projection Data from outside sources (not UDAQ):
1995-2009: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food,

UDAQ's Projection Calculations:
2010-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 118: CATTLE AND COWS FOR MEAT (head count)
Historic and Projection Data from outside sources (not UDAQ):
1995-2009: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food,

UDAQ's Projection Calculations:
2010-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 119: CATTLE AND COWS FOR MILK (head count)
Historic and Projection Data from outside sources (not UDAQ):
1995-2009: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food,

UDAQ's Projection Calculations:
2010-2050: Estimates are calculated using the agricultural employment growth rate.

TABLE 120: CHICKENS FOR EGGS AND MEAT (head count)
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food,

UDAQ's Projection Calculations:
2009-2050: Projections are calculated using the agricultural employment growth rate.

TABLE 121: SHEEP & LAMBS (head count)
Historic and Projection Data from outside sources (not UDAQ):
1995-2009: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "Utah Agricultural Statistics and Utah Department of Agriculture and Food,

UDAQ's Projection Calculations:
2010-2050: All projections are calculated using the agricultural employment growth rate.

TABLE 122: TURKEYS (head count)

2000 and 2005: Norbest internet site, "norbest.com," reports 5,000,000 turkeys sent to market from farms in Juab, Sanpete, Sevier, and Washington counties.

UDAQ's Projection Calculations:
1995-1998, 2000-2004, and 2006-2050: The value is held constant since only one year is given. Employee of Norbest reconfirmed in 2005 that they grow

TABLE 123: PIGS AND HOGS (head count)
Historic and Projection Data from outside sources (not UDAQ):
1995-2008: Data is from the Dept. of Agriculture (DOAg), printed publication entitled "2001, 2003, 2006, 2007, 2008, and 2009 Utah Agricultural Statistics and Utah

UDAQ's Projection Calculations:
2009-2050: All projections are calculated using the agricultural employment growth rate.

TABLE 124: WILD ANIMALS, All Of Utah. (head count)
Historic and Projection Data from outside sources (not UDAQ):
1999-2002, 2020-2050: Data is supplied by the Utah's Dept. of Natural Resources (DNR), Wildlife Resources, Steve Cranney et al., (801)538-4870. His office
2006 (excluding antelope): Data is from Utah Division of Wildlife Resources website www.Wildlife.Utah.gov/proclamations/2006_biggame/
2002-2008: Deer, elk, antelope from "Utah Big Game Annual Report 2008," Dept. of Natural Resources. (Appendix 35)
2001 and 2005: Moose from "Utah Big Game Annual Report 2007," Dept. of Natural Resources.

UDAQ's Projection Calculations:
1995-1998, 2003-2004, and 2006-2019: Estimates are made by UDAQ using straight-line extrapolation between DNR historic and projection data.

TABLE 125: PAVED ROADS (lane miles of pavement)
Historic and Projection Data from outside sources (not UDAQ):
1995-2009: Itemized printouts are generated by the Utah Dept. of Transportation (DOT). (Appendix 37)

UDAQ's Projection Calculations:
2010: Domain counties emissions are calculated using regression analysis. (Appendix 84) Other counties are calculated using population.

TABLE 126: PAVED ROADS PERCENT OF CHANGE (lane miles of pavement)
UDAQ's Projection Calculations:
1995-2050: Percentage of growth is calculated using Table 125.

TABLE 127: CLASS B AND C ROAD ALLOCATIONS

Historic and Projection Data from outside sources (not UDAQ):
1995-2009: Data is from the Utah Dept. of Transportation (DOT), printed publication "Annual Statistic Summary" for the years 1995-2004 and 2006-2009 and

UDAQ's Projection Calculations:
2010-2050: All projections are calculated using the construction jobs growth rate.

TABLE 128: NEW RESIDENTIAL HOUSES AND APARTMENTS (new dwelling units)

Historic and Projection Data from outside sources (not UDAQ):
1995-2009: Data is from the "Bureau of Economic and Business Research" (BEBR) "Utah Construction Report Table 3, "Summary of Residential Construction by

UDAQ's Projection Calculations:
2010-2050: Year value is multiplied by the annual change in human population for each progressive year.

TABLE 129: SINGLE FAMILY HOME CONSTRUCTION IN UTAH (INCLUDING CABINS)

Historic and Projection Data from outside sources (not UDAQ):
1995-2009: Data is from the "Bureau of Economic and Business Research" (BEBR) "Utah Construction Report Table 3, "Summary of Residential Construction by

UDAQ's Projection Calculations:
2010-2050: Year value is multiplied by the annual change in human population for each progressive year.

TABLE 130: TWO-FAMILY HOME CONSTRUCTION IN UTAH (BUILDINGS)

Historic and Projection Data from outside sources (not UDAQ):
1995-2009: Data is from the "Bureau of Economic and Business Research" (BEBR) "Utah Construction Report Table 3, "Summary of Residential Construction by

UDAQ's Projection Calculations:
2010-2050: Year value is multiplied by the annual change in human population for each progressive year.

TABLE 131: APARTMENT CONSTRUCTION IN UTAH

Historic and Projection Data from outside sources (not UDAQ):
1995-2009: Data is from the "Bureau of Economic and Business Research" (BEBR) "Utah Construction Report Table 3, "Summary of Residential Construction by

UDAQ's Projection Calculations:
2010-2050: Year value is multiplied by the annual change in human population for each progressive year.

TABLE 132: NON-RESIDENTIAL CONSTRUCTION VALUE

Historic and Projection Data from outside sources (not UDAQ):
1995-2005: Data is from the 1995 through 2007 "Bureau of Economic and Business Research" (BEBR) "Utah Construction Report," Table 2, Permit-Authorized
2006-2009: Data is from the Bureau of Economic and Business Research webpage "Table 2, Utah Construction Information Database located at

UDAQ's Projection Calculations:
2010-2050: Year 2005 value is multiplied by the annual change in human population for each progressive year.

TABLE 133: QUERY OF POINT SOURCE VOC FROM ARCHITECTURAL COATINGS (tons of VOC)

Historic and Projection Data from outside sources (not UDAQ):
1996-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in population.

TABLE 134: QUERY OF POINT SOURCE VOC FROM AUTOMOBILE SURFACE COATINGS (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing employment.

TABLE 135: NEI/SIP - QUERY OF POINT SOURCE VOC FROM PAPER, FILM AND FOIL COATING.
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 136: QUERY OF POINT SOURCE VOC FROM INDUSTRIAL SURFACE COATINGS (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 137: QUERY OF POINT SOURCE VOC FROM METAL FURNITURE AND FIXTURES SURFACE COATINGS (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 138: QUERY OF POINT SOURCE VOC FROM METAL CONTAINERS SURFACE COATINGS (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 139: QUERY OF POINT SOURCE VOC FROM NEW AUTOMOBILES SURFACE COATINGS (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 140: QUERY OF POINT SOURCE VOC FROM MACHINERY AND EQUIPMENT SURFACE COATINGS (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 141: QUERY OF POINT SOURCE VOC FROM APPLIANCES SURFACE COATINGS (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 142: QUERY OF POINT SOURCE VOC FROM OTHER TRANSPORTATION EQUIPMENT SURFACE COATINGS (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 143: QUERY OF POINT SOURCE VOC FROM SHEET, STRIP, AND COIL SURFACE COATINGS (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 144: QUERY OF POINT SOURCE VOC FROM FACTORY FINISHED WOOD SURFACE COATINGS (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 145: NEI/SIP - QUERY OF POINT SOURCE VOC FROM AIRCRAFT SURFACE COATINGS (tons/year)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 146: NEI/SIP - QUERY OF POINT SOURCE VOC FROM RAILROAD SURFACE COATINGS (tons/year)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 147: QUERY OF POINT SOURCE VOC FROM ELECTRICAL INSULATION SURFACE COATINGS (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 148: QUERY OF POINT SOURCE VOC FROM OTHER PRODUCTS SURFACE COATINGS (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 149: QUERY OF POINT SOURCE VOC FROM HIGH PERFORMANCE MAINTENANCE SURFACE COATINGS (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 150: QUERY OF POINT SOURCE VOC FROM OTHER SPECIAL PURPOSE SURFACE COATINGS (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 151: QUERY OF ALL POINT SOURCE VOC FROM SOLVENT CLEANING AND DEGREASING (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 152: QUERY OF POINT SOURCE VOC FROM AUTO SOLVENT CLEANING AND DEGREASING (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 153: QUERY OF POINT SOURCE VOC FROM ELECTRONIC SOLVENT CLEANING AND DEGREASING (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 154: QUERY OF POINT SOURCE VOC FROM OTHER SOLVENT CLEANING AND DEGREASING (tons of VOC)
Historic and Projection Data from outside sources (not UDAQ):
2000-2008: A query is made of all "industrial surface coatings" reported to UDAQ's Point Source Inventory for a given year. The query occurs after reports are

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing jobs.

TABLE 155: QUERY OF POINT SOURCE VOC FROM BAKERIES (SIC beginning with 2051 through 2053. Units are "tons voc per year").
Historic and Projection Data from outside sources (not UDAQ):
1996-2008: A query is made of all bakeries in Utah. The query occurs after reports are received, checked, and added to UDAQ database. Throughputs for sources

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in population.

TABLE 156: QUERY OF POINT SOURCE VOC FROM GRAPHIC ARTS (SCC BEGINNING WITH 402)
Historic and Projection Data from outside sources (not UDAQ):

2000-2008: A query is made of all graphic art processes in Utah. The query occurs after reports are received, checked, and added to UDAQ database.

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in manufacturing employment.

TABLE 157: QUERY OF AMMONIA FROM POINT SOURCES
Historic and Projection Data from outside sources (not UDAQ):
Data included in Point Source data.

TABLE 158: LEAKING UNDERGROUND STORAGE TANKS (sites)
Historic and Projection Data from outside sources (not UDAQ):
2000-2009: The list of LUST sites is from the Utah State Underground Storage program website. (Appendix 46)

UDAQ's Projection Calculations:
2010-2050: The estimates are calculated using average of prior years.

TABLE 159: SEWER POINT SOURCES (VOC tons/year)
Historic and Projection Data from outside sources (not UDAQ):
2000-2007: A query is made of all sewer ozone point sources in domain. (Appendix 47)

UDAQ's Projection Calculations:
2010-2050: The estimates are calculated using the percent of population growth.

TABLE 160: ACRES OF AGRICULTURAL BURNED
Historic and Projection Data from outside sources (not UDAQ)
1997 and 2002: Utah State University survey on agricultural burning is used. (Appendix 48)

UDAQ's Projection Calculations:
1997-2001, and 2003-2050: The estimates are calculated using the growth rate of agricultural jobs.

TABLE 161: DRY CLEANING FACILITIES
Historic and Projection Data from outside sources (not UDAQ):
2006 and 2008: Data from the Utah Division of Air Quality's HAPS section. (Appendix 49)

UDAQ's Projection Calculations:
2006-2007: Number of facilities is found by interpolation.
2009-2050: Number of facilities is calculated using the percent of growth in population.

TABLE 162: DRY CLEANING EMPLOYEES
Historic and Projection Data from outside sources (not UDAQ):
2006: Employment data from the U.S. Census Bureau, 2006, adjusted for companies reporting range of employees. These calculations are found in EPA's "2008

UDAQ's Projection Calculations:
2007-2050: grown by population growth.

TABLE 163: EMISSIONS FROM POINT SOURCE DRY CLEANING FACILITIES
Historic and Projection Data from outside sources (not UDAQ):
2001 - 2008: Data from the Utah Division of Air Quality's emissions data base. No point sources.

UDAQ's Projection Calculations:
2007-2050: grown by population growth.

TABLE 164: CO AIRCRAFT EMISSIONS

Historic and Projection Data from outside sources (not UDAQ):
1995-2004: No data.
2005, 2007-2009: Data from the Utah Division of Air Quality's Mobile Section. (Appendix 50)

UDAQ's Projection Calculations:
2006, 2010-2050: Emissions calculated using the forecast of domestic and internationally available aircraft seat miles percentage of change.

TABLE 165: VOC AIRCRAFT EMISSIONS

Historic and Projection Data from outside sources (not UDAQ):
1995-2004: No data.
2005, 2007-2009: Data from the Utah Division of Air Quality's Mobile Section. (Appendix 50)

UDAQ's Projection Calculations:
2006, 2010-2050: Emissions calculated using the forecast of domestic and internationally available aircraft seat miles percentage of change.

TABLE 166: NOx AIRCRAFT EMISSIONS

Historic and Projection Data from outside sources (not UDAQ):
1995-2004: No data.
2005, 2007-2009: Data from the Utah Division of Air Quality's Mobile Section. (Appendix 50)

UDAQ's Projection Calculations:
2006, 2010-2050: Emissions calculated using the forecast of domestic and internationally available aircraft seat miles percentage of change.

TABLE 167: SOx AIRCRAFT EMISSIONS

Historic and Projection Data from outside sources (not UDAQ):
1995-2004: No data.
2005, 2007-2009: Data from the Utah Division of Air Quality's Mobile Section. (Appendix 50)

UDAQ's Projection Calculations:
2006, 2010-2050: Emissions calculated using the forecast of domestic and internationally available aircraft seat miles percentage of change.

TABLE 168: PM10 AIRCRAFT EMISSIONS

Historic and Projection Data from outside sources (not UDAQ):
1995-2004: No data.
2005, 2007-2009: Data from the Utah Division of Air Quality's Mobile Section. (Appendix 50)

UDAQ's Projection Calculations:
2006, 2010-2050: Emissions calculated using the forecast of domestic and internationally available aircraft seat miles percentage of change.

TABLE 169: PM25 AIRCRAFT EMISSIONS

Historic and Projection Data from outside sources (not UDAQ):
1995-2004: No data.
2005, 2007-2009: Data from the Utah Division of Air Quality's Mobile Section. (Appendix 50)

UDAQ's Projection Calculations:
2006, 2010-2050: Emissions calculated using the forecast of domestic and internationally available aircraft seat miles percentage of change.

TABLE 170: VEHICLE MILES TRAVELED DAILY (VMT)

Historic and Projection Data from outside sources (not UDAQ):
1995-2009: Utah Highway Performance Monitoring System and Traffic on Utah Highways at http://www.udot.utah.gov/main/f?p=100:pg:0:::V,T:,530. Other data is

UDAQ's Projection Calculations:
2010-2030: Emissions for some years for some counties were provided by UDOT and MPO. Interalation was used to estimate the in between years. Population
2010-2050: Growth is based on population.

TABLE 171: VEHICLE MILES TRAVELED PERCENTAGE CHANGE
Historic and Projection Data from outside sources (not UDAQ):
1995-2009: Utah Highway Performance Monitoring System and Traffic on Utah Highways at http://www.udot.utah.gov/main/f?p=100:pg:0:::V,T:,530. Other data is

UDAQ's Projection Calculations:
2010-2030: Emissions for some years for some counties were provided by UDOT and MPO. Interalation was used to estimate the in between years. Population
2010-2050: Growth is based on population.

TABLE 172: VEHICLE MILES TRAVELED ANNUALLY
Historic and Projection Data from outside sources (not UDAQ):
1995-2009: Utah Highway Performance Monitoring System and Traffic on Utah Highways at http://www.udot.utah.gov/main/f?p=100:pg:0:::V,T:,530 (Appendix 51)

UDAQ's Projection Calculations:
2010-2050: Growth is based on population.

TABLE 173: CUTBACK ASPHALT USAGE (Annual tons)
Historic and Projection Data from outside sources (not UDAQ):
2008: Amount of Cutback Asphalt used in Utah is from a survey by the "Asphalt Institute." (Appendix 7)

UDAQ's Projection Calculations:
1995-2007, 2009-2050: Amount of cutback asphalt used is based on the change in lane-miles.

TABLE 174: EMULSIFIED ASPHALT USAGE (Annual tons)
Historic and Projection Data from outside sources (not UDAQ):
2008: Amount of Emulsified Asphalt used in Utah is from a survey by the "Asphalt Institute." (Appendix 7)

UDAQ's Projection Calculations:
1995-2007, 2009-2050: Amount of cutback asphalt used is based on the change in lane-miles.

TABLE 175: SAND & GRAVEL - USE SCC 2270002000 FOR CO (sources not reported as point sources)
Historic and Projection Data from outside sources (not UDAQ):
2008: Inventory data from sand and gravel sources. (Appendix 52)

UDAQ's Projection Calculations:
2002-2007, 2009-2050: Emissions calculated using the mining employment growth.

TABLE 176: SAND AND GRAVEL - CO
Historic and Projection Data from outside sources (not UDAQ):
2008: Inventory data from sand and gravel sources. (Appendix 52)

UDAQ's Projection Calculations:
2002-2007, 2009-2050: Emissions calculated using the mining employment growth.

TABLE 177: NEI - SAND & GRAVEL - USE SCC 2270002000 FOR NOx (sources not reported as point sources)
Historic and Projection Data from outside sources (not UDAQ):
2008: Inventory data from sand and gravel sources. (Appendix 52)

UDAQ's Projection Calculations:

2002-2007, 2009-2050: Emissions calculated using the mining employment growth.

TABLE 178: SAND & GRAVEL - NOx
Historic and Projection Data from outside sources (not UDAQ):
2008: Inventory data from sand and gravel sources. (Appendix 52)

UDAQ's Projection Calculations:
2002-2007, 2009-2050: Emissions calculated using the mining employment growth.

TABLE 179: SAND & GRAVEL - USE SCC 30502501 FOR PM10 (sources not reported as point sources)
Historic and Projection Data from outside sources (not UDAQ):
2008: Inventory data from sand and gravel sources. (Appendix 52)

UDAQ's Projection Calculations:
2002-2007, 2009-2050: Emissions calculated using the mining employment growth.

TABLE 180: SAND & GRAVEL - PM11
Historic and Projection Data from outside sources (not UDAQ):
2008: Inventory data from sand and gravel sources. (Appendix 52)

UDAQ's Projection Calculations:
2002-2007, 2009-2050: Emissions calculated using the mining employment growth.

TABLE 181: SAND & GRAVEL - USE SCC 30502501 FOR PM2.5 (sources not reported as point sources)
Historic and Projection Data from outside sources (not UDAQ):
2008: Inventory data from sand and gravel sources. (Appendix 52)

UDAQ's Projection Calculations:
2002-2007, 2009-2050: Emissions calculated using the mining employment growth.

TABLE 182: SAND & GRAVEL - PM2.6
Historic and Projection Data from outside sources (not UDAQ):
2008: Inventory data from sand and gravel sources. (Appendix 52)

UDAQ's Projection Calculations:
2002-2007, 2009-2050: Emissions calculated using the mining employment growth.

TABLE 183: SAND & GRAVEL - USE SCC 2270002000 FOR SOx (sources not reported as point sources)
Historic and Projection Data from outside sources (not UDAQ):
2008: Inventory data from sand and gravel sources. (Appendix 52)

UDAQ's Projection Calculations:
2002-2007, 2009-2050: Emissions calculated using the mining employment growth.

TABLE 184: SAND & GRAVEL - SOx
Historic and Projection Data from outside sources (not UDAQ):
2008: Inventory data from sand and gravel sources. (Appendix 52)

UDAQ's Projection Calculations:
2002-2007, 2009-2050: Emissions calculated using the mining employment growth.

TABLE 185: SAND & GRAVEL - USE SCC 2270002000 FOR VOC (sources not reported as point sources)

Historic and Projection Data from outside sources (not UDAQ):
2008: Inventory data from sand and gravel sources. (Appendix 52)

UDAQ's Projection Calculations:
2002-2007, 2009-2050: Emissions calculated using the mining employment growth.

TABLE 186: SAND & GRAVEL - VOC
Historic and Projection Data from outside sources (not UDAQ):
2008: Inventory data from sand and gravel sources. (Appendix 52)

UDAQ's Projection Calculations:
2002-2007, 2009-2050: Emissions calculated using the mining employment growth.

TABLE 187: US ARCHITECTURAL COATINGS
Historic and Projection Data from outside sources (not UDAQ):
1995-1999: No data.
2006-2008: Data is from the US Census Bureau. (Appendix 53)

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in population.

TABLE 188: US ARCHITECTURAL COATINGS EXTERIOR SOLVENT TYPE
Historic and Projection Data from outside sources (not UDAQ):
1995-1999: No data.
2006-2008: Data is from the US Census Bureau. (Appendix 53)

UDAQ's Projection Calculations:
2008-2050: Calculation made using the percentage of change in population.

TABLE 189: US ARCHITECTURAL COATINGS INTERIOR SOLVENT TYPE
Historic and Projection Data from outside sources (not UDAQ):
1995-1999: No data.
2006-2008: Data is from the US Census Bureau. (Appendix 53)

UDAQ's Projection Calculations:
2008-2050: Calculation made using the percentage of change in population.

TABLE 190: US ARCHITECTURAL COATINGS LACQUERS
Historic and Projection Data from outside sources (not UDAQ):
1995-1999: No data.
2006-2008: Data is from the US Census Bureau. (Appendix 53)

UDAQ's Projection Calculations:
2008-2050: Calculation made using the percentage of change in population.

TABLE 191: US ARCHITECTURAL COATINGS N.S.K.
Historic and Projection Data from outside sources (not UDAQ):
1995-1999: No data.
2006-2008: Data is from the US Census Bureau. (Appendix 53)

UDAQ's Projection Calculations:
2008-2050: Calculation made using the percentage of change in population.

TABLE 192: US ARCHITECTURAL COATINGS ARCHITECTURAL SOLVENT TOTAL (MILLIONS OF GALLONS)
Historic and Projection Data from outside sources (not UDAQ):
1995-1999: No data.
2006-2008: Data is from the US Census Bureau. (Appendix 53)

UDAQ's Projection Calculations:
2008-2050: Calculation made using the percentage of change in population.

TABLE 193: US ARCHITECTURAL COATINGS ARCHITECTURAL EXTERIOR WATER TYPE (MILLIONS OF GALLONS)
Historic and Projection Data from outside sources (not UDAQ):
1995-1999: No data.
2006-2008: Data is from the US Census Bureau. (Appendix 53)

UDAQ's Projection Calculations:
2009-2050: Calculation made using the percentage of change in population.

TABLE 194: US ARCHITECTURAL COATINGS ARCHITECTURAL INTERIOR WATER TYPE (MILLIONS OF GALLONS)
Historic and Projection Data from outside sources (not UDAQ):
1995-1999: No data.
2006-2008: Data is from the US Census Bureau. (Appendix 53)

UDAQ's Projection Calculations:
2008-2050: Calculation made using the percentage of change in population.

TABLE 195: US ARCHITECTURAL COATINGS ARCHITECTURAL WATER TYPE TOTAL (MILLIONS OF GALLONS)
Historic and Projection Data from outside sources (not UDAQ):
1995-1999: No data.
2006-2008: Data is from the US Census Bureau. (Appendix 53)

UDAQ's Projection Calculations:
2008-2050: Calculation made using the percentage of change in population.

TABLE 196: LANDFILL POINT SOURCES VOCS
Historic and Projection Data from outside sources (not UDAQ):
2008: A query is made of all Landfill point sources in domain. (Appendix 54)

UDAQ's Projection Calculations:
2007, 2009-2050: Calculation made using the percentage of change in population.

TABLE 197: LANDFILL POINT SOURCES PM11
Historic and Projection Data from outside sources (not UDAQ):
2008: A query is made of all Landfill point sources in domain. (Appendix 54)

UDAQ's Projection Calculations:
2007, 2009-2050: Calculation made using the percentage of change in population.

TABLE 198: LANDFILL POINT SOURCES PM26
Historic and Projection Data from outside sources (not UDAQ):
2008: A query is made of all Landfill point sources in domain. (Appendix 54)

UDAQ's Projection Calculations:

2007, 2009-2050: Calculation made using the percentage of change in population.

TABLE 199: POLLUTANT CODES (NEI)

TABLE 200, NAICS CODES