ADEQ
Arizona Department
of Environmental Quality

Appendix A
2015 Ozone Boundary Recommendation Technical Support Document

Air Quality Division
May 31, 2016 Draft

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Table of Contents

Table of Contents ..... A-iii
Index of Figures ..... A-iv
Index of Tables ..... A-iv
A1 Data Sources A-1
A2 Ambient Air Data A-5
A2.1 Ozone Design Values A-5
A3 Meteorological Analyses A-8
A3.1 Wind Rose Analysis A-8
A3.2 HYSPLIT Analyses A-9
A3.2.1 HYSPLIT Back Trajectory Analysis A-9
A3.2.2 Openair HYSPLIT Analysis A-10
Exhibit AI – HYSPLIT Back Trajectories AI-1
AI1 Tonto National Monument Monitor – Gila County (04-007-0010) AI-2
AI2 West Phoenix Monitor – Maricopa County (04-013-0019) AI-4
AI3 Mesa Monitor – Maricopa County (04-013-1003) AI-6
AI4 North Phoenix Monitor – Maricopa County (04-013-1004) AI-8
AI5 Falcon Field Monitor – Maricopa County (04-013-1010) AI-10
AI6 Pinnacle Peak Monitor – Maricopa County (04-013-2005) AI-12
AI7 Central Phoenix Monitor – Maricopa County (04-013-3002) AI-14
AI8 South Scottsdale Monitor – Maricopa County (04-013-3003) AI-16
AI9 South Phoenix Monitor – Maricopa County (04-013-4003) AI-18
AI10 Cave Creek Monitor – Maricopa County (04-013-4008) AI-20
AI11 Humboldt Mountain Monitor – Maricopa County (04-013-9508) AI-22
AI12 Blue Point Monitor – Maricopa County (04-013-9702) AI-24
AI13 Rio Verde Monitor – Maricopa County (04-013-9706) AI-26
AI14 JLG Supersite Monitor – Maricopa County (04-013-9997) AI-28
AI15 Queen Valley Monitor – Pinal County (04-021-8001) AI-30
AI16 Yuma Supersite Monitor – Yuma County (04-027-8011) AI-32

Index of Figures

Figure A2-1 Arizona Ozone Monitoring Network A-6
Figure A3-1 JLG Supersite Wind Rose for the Ten Highest Ozone Days (2013-2015) A-8
Figure A3-2 JLG Supersite HYSPLIT Back Trajectory for July 8th, 2013 ..... A-10
Figure A3-3 JLG Supersite Seasonal HYSPLIT Back Trajectories A-11
Figure A3-4 JLG Supersite Seasonal HYSPLIT Density Map A-12
Figure A3-5 JLG Supersite Seasonal Ozone Concentration Specific HYSPLIT Trajectory Map ... A-13

Index of Tables

Table A1-1 Data Sources for Ambient Air Data A-2
Table A1-2 Data Sources for Emissions and Emissions Related Data A-2
Table A1-3 Data Sources for Meteorological Data A-3
Table A1-4 Data Sources for Geographic and Topographic Data A-3
Table A1-5 Data Sources for Jurisdictional Boundary Data A-4
Table A2-1 Ozone Design Values A-7

A1 Data Sources

The tables below (Table A1-1, Table A1-2, Table A1-3, Table A1-4, and

Table A1-5) list the data sets and sources of all data collected and used for the five factor analysis.

Table A1-1 Data Sources for Ambient Air Data

Air Quality Data			
Description	**Data Year**	**Data Source**	**Downloaded**
Ozone Design Values for All Sites in Arizona	1995-2015	EPA Air Quality System (AQS) Design Value Reports	03/31/2016
Hourly Ozone Concentrations for All Sites in Arizona	2013-2015	EPA Air Quality System (AQS) Hourly Data Reports	03/31/2016

Table A1-2 Data Sources for Emissions and Emissions Related Data

Emissions and Emissions Related Data			
Description	**Data Year**	**Data Source**	**Downloaded**
County NOx and VOC Emissions	2011	EPA National Emissions Inventory (NEI) version 2 https://www.epa.gov/air-emissions-inventories/2011-national-emissions-inventory-nei-data	04-11-2016
Census Population by County	2000 and 2010	Arizona Department Of Administration (ADOA) – Intercensal Estimates https://population.az.gov/population-estimates	04-11-2016
CDP Level Census Population	2000 and 2010	U.S. Census Bureau - http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_00_PL_GCTPL.ST10&prodType=table	03/04/2016
Arizona Population Estimates	2015	Arizona Department Of Administration (ADOA) - https://population.az.gov/population-estimates	03/04/2016
County to County Commuting Data	2009-2013	U.S. Census Commuting Patterns (American Community Survey) - http://www.census.gov/hhes/commuting/ YMPO Regional Transportation Plan MAG Regional Transportation Plan	04/11/2016
Arizona Prison Populations	2000 and 2010	Data provided by Arizona Department of Corrections	03/02/2016
EPA Transport Modeling Data	*2011 (base year) modeled forward to 2017	Air Quality Modeling TSD for the 2008 Ozone NAAQS Cross-State Air Pollution Rule Proposal and data files https://www.epa.gov/airmarkets/proposed-cross-state-air-pollution-update-rule	04/14/16
Traffic Data (Annual Average Daily Traffic)	2014	Data provided by Arizona Department of Transportation	11/02/2015
Census Block Level Population and # of Households	2000 and 2010	U.S. Census Bureau - ftp://ftp2.census.gov/geo/tiger/TIGER2010BLKPOPHU/	10/26/2015
ADEQ Point Source Data	2014	Major source data from SLEIS datasets.	10/26/2015

Maricopa County Point Source Data	2014	Maricopa County Air Quality Department provided a major and synthetic minor source list	02/04/2016
Pinal County Point Source Data	2014	Pinal County Air Quality Control District provided a major and synthetic minor source list	02/08/2016
Mexican Emissions Inventory data	2011	Eastern Research Group's Technical Documentation for Year 2015 Ozone Precursor Emission Inventory for U.S., Mexico, And Canada And Year 2011 Ozone Precursor Emission Inventory For Mexico - provided by the Maricopa Association of Governments	--
Southern California Counties' Point Source Data	2011	National Emissions Inventory (NEI) version 2 https://www.epa.gov/air-emissions-inventories/2011-national-emissions-inventory-nei-data	05/04/2016
Arizona Border Crossing Counts (Yuma and Nogales)	2013-2015	U.S. Department of Transportation - Bureau of Transportation Statistics http://transborder.bts.gov/programs/international/transborder/TBDR_BC/TBDR_BC_Index.html	05/04/2016

Table A1-3 Data Sources for Meteorological Data

Meteorological Data			
Description	**Data Year**	**Data Source**	**Downloaded**
Hourly Meteorological Data (Wind speed and wind direction) for 7 selected sites	2013-2015	Air Quality System (AQS) Hourly Data Reports and internal ADEQ data	04/28/2016

Table A1-4 Data Sources for Geographic and Topographic Data

Geography and Topography Data			
Description	**Data Year**	**Data Source**	**Downloaded**
Arizona Aerial Photography	2004-2013	ADEQ internal shapefiles	--
World Terrain Basemap	2009	Environmental Systems Research Institute (ESRI): http://goto.arcgisonline.com/maps/World_Terrain_Base	--
World Street Basemap	2016	Environmental Systems Research Institute (ESRI): http://goto.arcgisonline.com/maps/World_Street_Map	--

Table A1-5 Data Sources for Jurisdictional Boundary Data

Jurisdictional Boundary Data			
Description	**Data Year**	**Data Source**	**Downloaded**
CBSA/MSA Boundaries	2015	U.S. Census Bureau - http://www.census.gov/cgi-bin/geo/shapefiles/index.php?year=2015&layergroup=Core+Based+Statistical+Areas	10/26/2015
Arizona County Boundaries	2014	Arizona Land Resource Information System	10/26/2015
Arizona Tribal Boundaries	2013	Arizona Land Resource Information System	01/26/2016
Arizona Township, Range and Selection	2014	Arizona Land Resource Information System	01/26/2016
Arizona MPO Boundaries	2015	National Transportation Atlas Databases (NTAD) via USDOT - http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_atlas_database/2015/polygon	10/26/2015
2008 Arizona 8-hour Ozone Boundary	2013	ADEQ internal shapefile	01/26/2016
Arizona Area A Boundary	2007	ADEQ internal shapefile	03/04/2016
Census Designated Places	2000 and 2010	U.S. Census Bureau - https://www.census.gov/geo/maps-data/data/cbf/cbf_place.html	03/04/2016
Public Land Ownership GIS layer	2012	Arizona Land Resource Information System	04/11/2016

A2 Ambient Air Data

A2.1 Ozone Design Values

Ambient ozone concentrations are monitored at numerous sites across Arizona. These monitoring sites are operated by the Arizona Department of Environmental Quality (ADEQ)[1], the Maricopa County Air Quality Department (MCAQD)[2], the Pima County Department of Environmental Quality (PCDEQ)[3], the Pinal County Air Quality Control District (PCAQCD)[4], and the Clean Air Status and Trends Network (CASTNET)[5]. Figure A2-1 below shows the locations of all of the ambient ozone monitors in Arizona. Table A2-1 below gives the site ID number, name, network, latitude, longitude, and the 2015 design value for all of the monitors in Arizona.

[1] Arizona Department of Environmental Quality. (2015, July 1). *State of Arizona Air Monitoring Network Plan for the Year 2015*. Retrieved from http://www.azdeq.gov/function/forms/download/air_monitoring_network_plan2015

[2] Maricopa County Air Quality Department. (2015, September). *2014 Air Monitoring Network Plan*. Retrieved from http://www.maricopa.gov/aq/divisions/monitoring/network.aspx

[3] Pima County Department of Environmental Quality. (2016). *2015 Ambient Air Monitoring Network Plan*. Retrieved from http://webcms.pima.gov/cms/one.aspx?portalId=169&pageId=61365

[4] Pinal County Air Quality Control District. (2015). *2015 Ambient Monitoring Network Plan and 2014 Data Summary*. Retrieved from http://pinalcountyaz.gov/AirQuality/Pages/MonitoringNetwork.aspx

[5] Clean Air Status and Trends Network (CASTNET). Retrieved from https://www.epa.gov/castnet

Figure A2-1 Arizona Ozone Monitoring Network

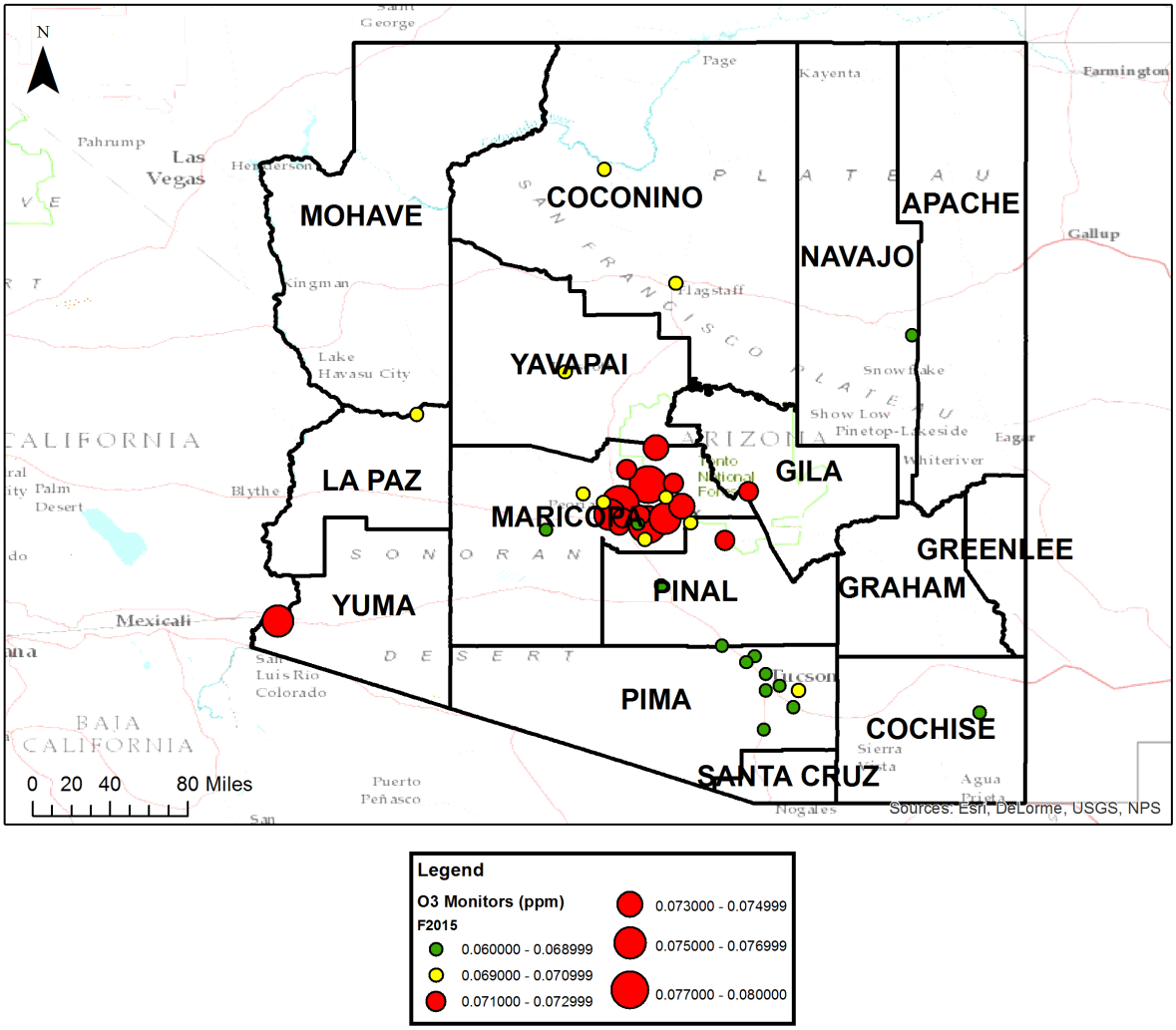


Table A2-1 Ozone Design Values

Site ID	Name	County	Network	Latitude	Longitude	2015 Design Value
04-003-8001	Chiricahua National Monument	Cochise	CASTNET	32.009405	-109.389058	.068
04-005-1008	Flagstaff Middle School	Coconino	SLAMS	35.2061	-111.6528	.070
04-005-8001	Grand Canyon National Park	Coconino	CASTNET	36.058642	-112.183575	.069
04-007-0010	Tonto National Monument	Gila	SLAMS	33.6547	-111.1074	.072
04-012-8000	Alamo Lake	La Paz	SLAMS	34.2439	-113.559	.070
04-013-0019	West Phoenix	Maricopa	SLAMS	33.48385	-112.14257	.075
04-013-1003	Mesa	Maricopa	SLAMS	33.41045	-111.86507	.078
04-013-1004	North Phoenix	Maricopa	SLAMS	33.56033	-112.06626	.077
04-013-1010	Falcon Field	Maricopa	SLAMS	33.45223	-111.73331	.075
04-013-2001	Glendale	Maricopa	SLAMS	33.56936	-112.19153	.070
04-013-2005	Pinnacle Peak	Maricopa	SLAMS	33.70655	-111.85557	.078
04-013-3002	Central Phoenix	Maricopa	SLAMS	33.45793	-112.04601	.072
04-013-3003	South Scottsdale	Maricopa	SLAMS	33.47968	-111.91721	.071
04-013-4003	South Phoenix	Maricopa	SLAMS	33.40316	-112.07533	.072
04-013-4004	West Chandler	Maricopa	SLAMS	33.29898	-111.88431	.070
04-013-4005	Tempe	Maricopa	SLAMS	33.4124	-111.93473	.064
04-013-4008	Cave Creek	Maricopa	SLAMS	33.82169	-112.017	.071
04-013-4010	Dysart	Maricopa	SLAMS	33.63713	-112.34184	.070
04-013-4011	Buckeye	Maricopa	SLAMS	33.37005	-112.6207	.060
04-013-9508	Humboldt Mountain	Maricopa	SLAMS	33.9828	-111.7987	.073
04-013-9702	Blue Point	Maricopa	SLAMS	33.54549	-111.60925	.074
04-013-9704	Fountain Hills	Maricopa	SLAMS	33.61103	-111.72529	.069
04-013-9706	Rio Verde	Maricopa	SLAMS	33.71881	-111.67183	.071
04-013-9997	JLG Supersite	Maricopa	SLAMS	33.5038	-112.096	.077
04-017-0119	Petrified Forest National Park	Navajo	CASTNET	34.822508	-109.892485	.066
04-019-0021	Saguaro National Park	Pima	SLAMS	32.174538	-110.737116	.069
04-019-1011	22nd & Craycroft	Pima	SLAMS	32.20442	-110.878067	.063
04-019-1018	Tangerine	Pima	SPM	32.42525	-111.0635	.065
04-019-1020	Fairgrounds	Pima	SPM	32.04768	-110.77435	.066
04-019-1028	Children's Park NCore	Pima	SLAMS	32.29515	-110.9823	.066
04-019-1030	Green Valley	Pima	SPM	31.87952	-110.99644	.064
04-019-1032	Rose Elementary	Pima	SPM	32.173	-110.980115	.065
04-019-1034	Coachline	Pima	SPM	32.38082	-111.12716	.063
04-021-3001	Apache Junction Maint. Yard	Pinal	SLAMS	33.4214	-111.544	.069
04-021-3003	Casa Grande Airport	Pinal	SLAMS	32.95436	-111.762	.065
04-021-3007	Pinal Air Park	Pinal	SLAMS	32.50831	-111.308	.065
04-021-8001	Queen Valley	Pinal	SLAMS	33.2938	-111.286	.071
04-025-8033	Prescott College	Yavapai	SLAMS	34.5451	-112.477	.069
04-027-8011	Yuma Supersite	Yuma	SLAMS	32.6903	-114.614	.076

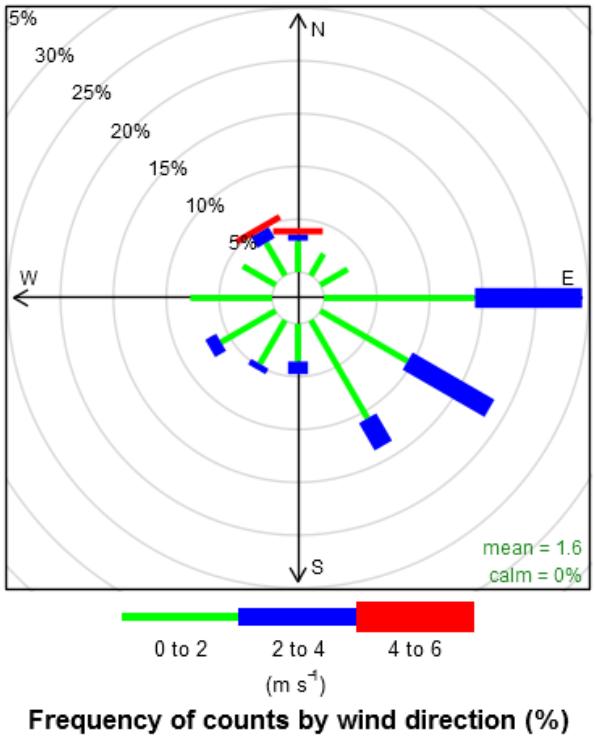
A3 Meteorological Analyses

A3.1 Wind Rose Analysis

Using 3 years of meteorological data for 2013-2015, ADEQ plotted wind roses to show the wind direction and wind speed for ambient ozone monitors, where meteorological data was available. Wind roses were plotted annually for each of the three years, as well as for the wind data for the ten highest monitored ozone days from 2013-2015.

For example, Figure A3-1 is the wind rose for the ten highest monitored ozone days at the JLG Supersite monitor in Phoenix, AZ for the 2013-2015 time period. This wind rose shows that around 25% of the winds are from the east, with an additional 35% from the southeast. For the winds from the east, around 15% of wind speeds are less than 2 m/s (about 4.5mph) and 10% are between 2 m/s and 4 m/s (about 4.5 to 9mph). The figure also shows that 0% of the winds are calm and that the average wind speed is 1.6 m/s (about 3.5mph).

Figure A3-1 JLG Supersite Wind Rose for the Ten Highest Ozone Days (2013-2015)



A3.2 HYSPLIT Analyses

A3.2.1 HYSPLIT Back Trajectory Analysis

The National Oceanic and Atmospheric Administration (NOAA) HYSPLIT model[6] was used to perform back trajectory analyses for the ozone monitoring sites in Arizona with design values above the 2015 NAAQS. Back trajectories were modeled for the ten highest ozone exceedance days from 2013-2015 for each of the violating monitoring sites. ADEQ elected to run an ensemble of back trajectories beginning at the end of the highest eight hour exceedance period for each of the ten highest exceedance days. Starting with the eighth hour of the exceedance, a new trajectory begins every preceding hour until all eight hours in the daily max ozone exceedance is represented with a 24 hour back trajectory.

The North American Mesoscale (NAM)[7] 12km meteorological model was selected for the initial meteorological input to the model. Also, ADEQ selected "model vertical velocity" as the method for computing vertical motion. To best represent surface conditions, a starting height for the model was selected at 100 meters above ground level (AGL), and the model was only run for 24 hours backward.

The above method accords with HYSPLIT method suggested in the EPA Guidance on the Area Designations for the 2015 Ozone National Ambient Air Quality Standards[8]. U.S. county borders, the default projection, vertical plot height units in meters AGL, and the six hour interval labels were all used for the display output.

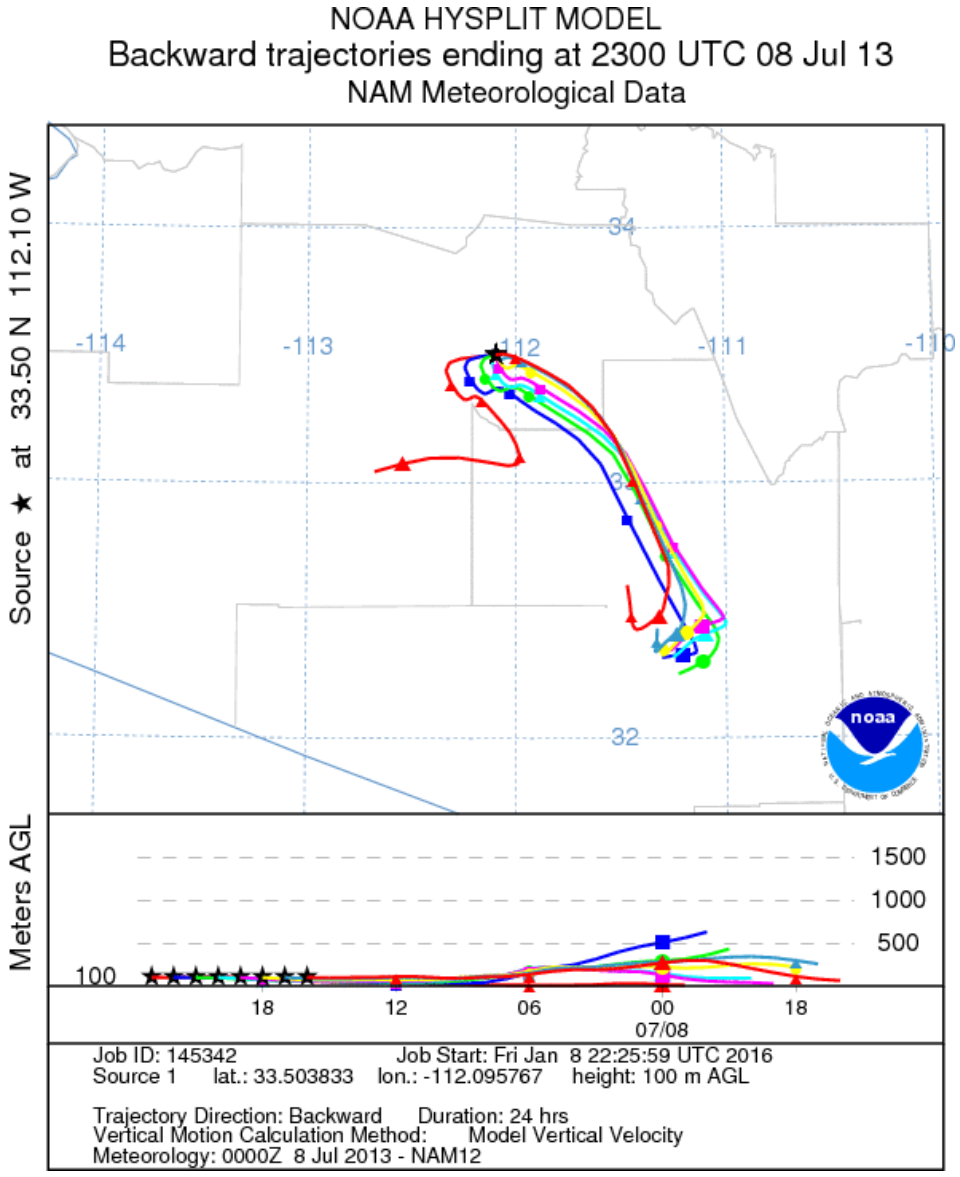
For example, Figure A3-2 is the HYSPLIT model output of back trajectories for the ozone exceedance at the JLG Supersite monitor on July 8th, 2013. The top half of the figure shows a different colored back-trajectory for each of the eight hours during the maximum 8-hour ozone exceedance and where it moves spatially in relation to the monitor (the star). This example shows that the majority of the back-trajectories came from the southeast. The bottom half of the image shows how the eight trajectories moved vertically in the atmosphere, with this example showing that only one of the eight trajectories reached an altitude of 500m above ground level.

[6] HYSPLIT - Hybrid Single Particle Lagrangian Integrated Trajectory Model. Retrieved from http://ready.arl.noaa.gov/HYSPLIT.php

[7] North American Mesoscale Forecast System (NAM). Retrieved from https://www.ncdc.noaa.gov/data-access/model-data/model-datasets/north-american-mesoscale-forecast-system-nam

[8] *Area Designations [Guidance] for the 2015 Ozone National Ambient Air Quality Standards*, Memorandum from Janet G. McCabe, Acting Assistant Administrator, to Regional Administrators, Regions 1-10, dated February 25, 2016.

Figure A3-2 JLG Supersite HYSPLIT Back Trajectory for July 8th, 2013



A3.2.2 Openair HYSPLIT Analysis

In addition to using the HYSPLIT model for trajectory analysis, Openair[9] was utilized in conjunction with HYSPLIT to perform additional trajectory analyses. Openair is an R programming language package for air quality data analysis.

Openair was utilized to run a HYSPLIT back trajectory analysis for two full years, 2013 and 2014. The model was run to calculate air mass trajectories in the preceding 24 hours starting at 0:00

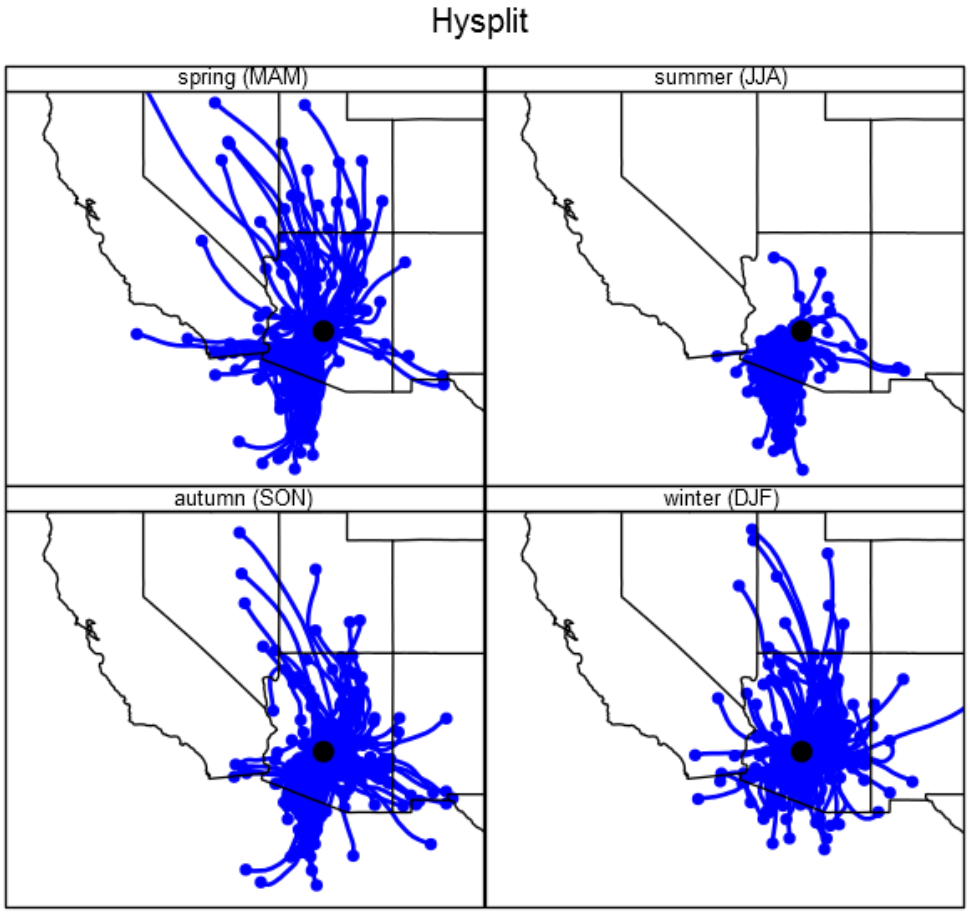
[9] Openair project: open-source tools for the analysis of air pollution data. NERC Knowledge Exchange Project. Retrieved from http://www.openair-project.org/Default.aspx

a.m. Arizona local time for each day in 2013 and 2014 at the receptor height (assumed to be 10 m). The HYSPLIT model was driven by the North American Regional Reanalysis[10] (NARR) meteorological dataset.

Seasonal variations were also plotted. For the season-specific ensembles, March, April and May were regarded as spring; June, July and August were treated as summer, September, October and November were treated as fall; December and the following January and February were regarded as winter.

Figure A3-3 below shows the back trajectory analysis for the JLG Supersite monitor in Phoenix. Every 24 hour back trajectory for every third hour in 2013 and 2014 is displayed by season, showing the general pattern of air-mass origin.

Figure A3-3 JLG Supersite Seasonal HYSPLIT Back Trajectories

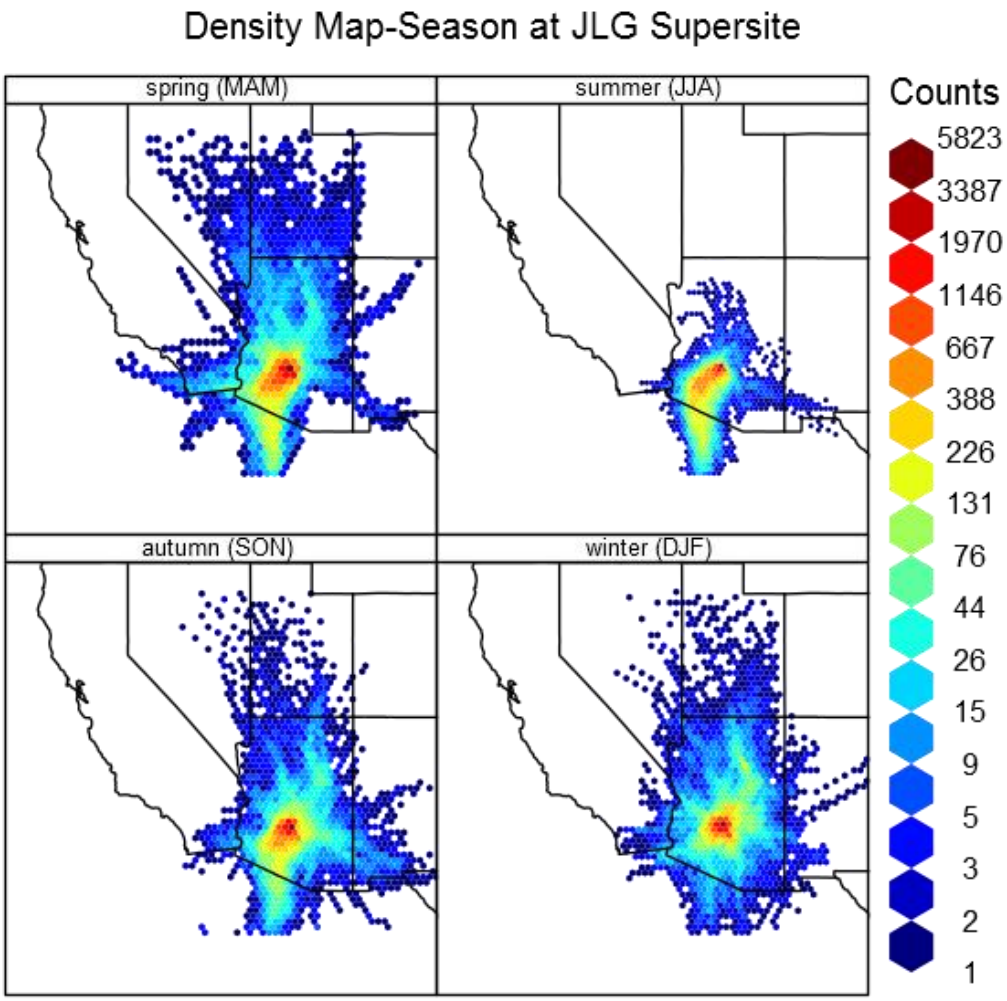


[10] North American Regional Reanalysis (NARR). Retrieved from https://www.ncdc.noaa.gov/data-access/model-data/model-datasets/north-american-regional-reanalysis-narr

A3.2.2.1 HYSPLIT Density Analysis

ADEQ created a HYSPLIT density map by using the latitude and longitude of the two-year modeling trajectories produced in the analysis above. Using the trajectories' positions and a hexagonal gridded domain in Openair, the number of trajectories that passed through each hexagonal area are shown in Figure A3-4.

Figure A3-4 JLG Supersite Seasonal HYSPLIT Density Map



A3.2.2.2 Concentration Bin HYSPLIT Analysis

ADEQ merged hourly ozone data with two year HYSPLIT results from above to investigate the potential area contributions to O_3 production in Phoenix area. The trajectories were labeled with the hourly ozone concentration at the monitor at the start time for the backwards trajectory, allowing each trajectory to be represented by the resulting ozone concentration.

In Figure A3-5 below, the concentration labeled trajectories were grouped into three ranges, concentrations below 0.05ppm, concentrations between 0.05 ppm and 0.07 ppm, and concentrations above 0.07 ppm. Each group is represented with a different color, to help visualize trajectories resulting in particularly higher ozone concentrations (above 0.07 ppm).

Figure A3-5 JLG Supersite Seasonal Ozone Concentration Specific HYSPLIT Trajectory Map

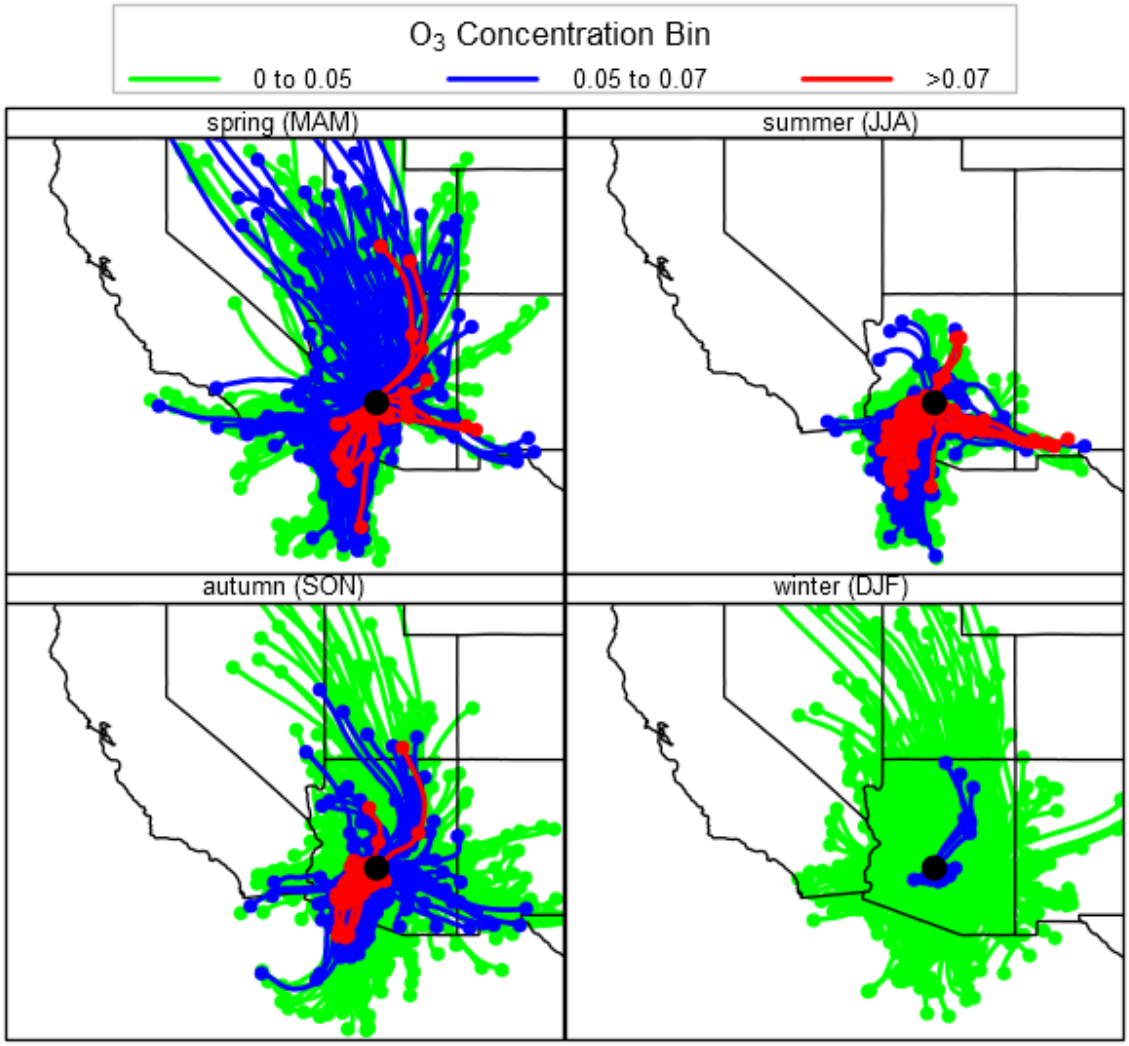
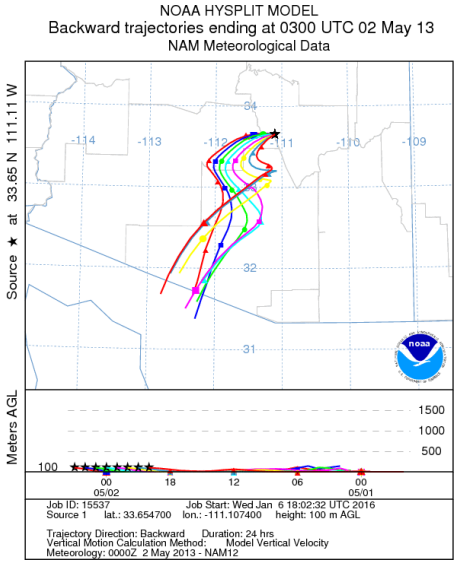
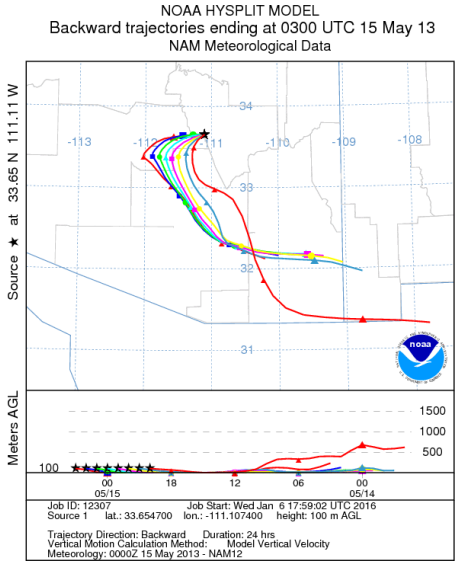
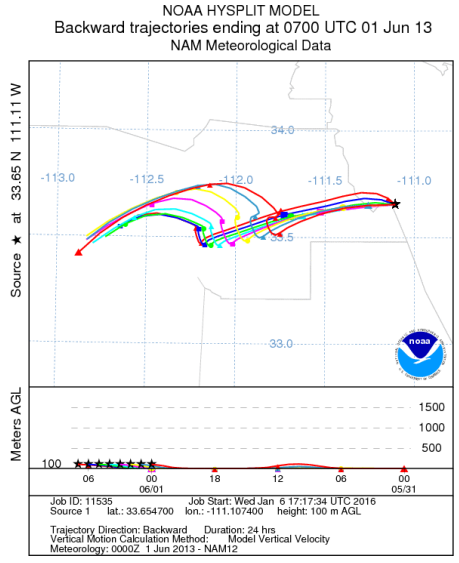


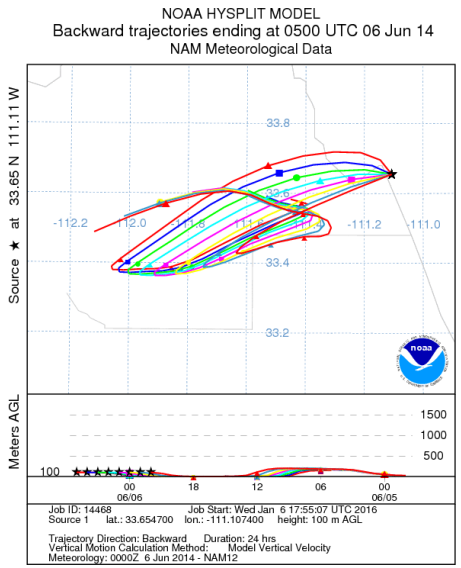
Exhibit AI – HYSPLIT Back Trajectories

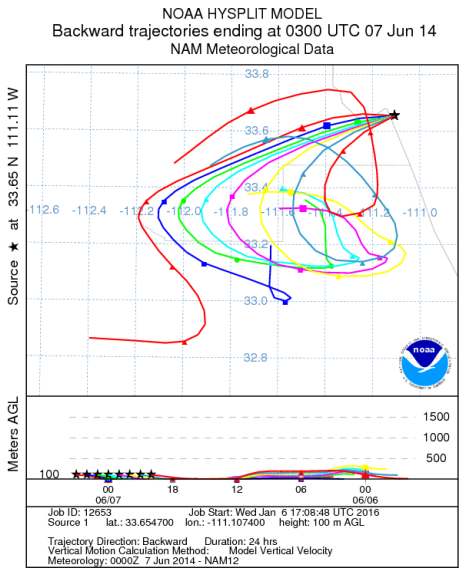
AI1 Tonto National Monument Monitor – Gila County (04-007-0010)

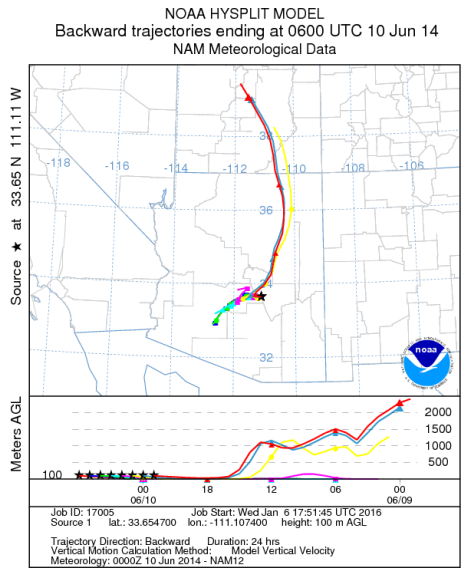


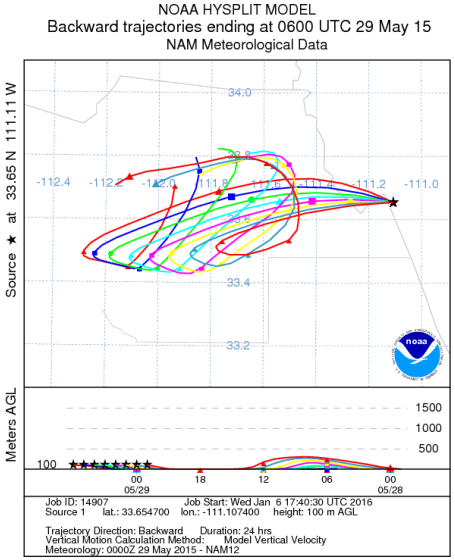


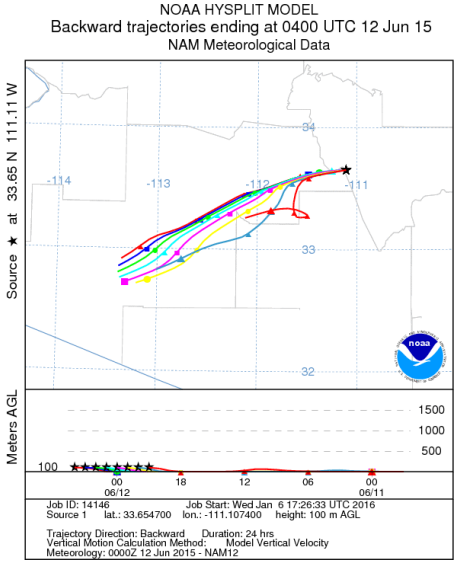


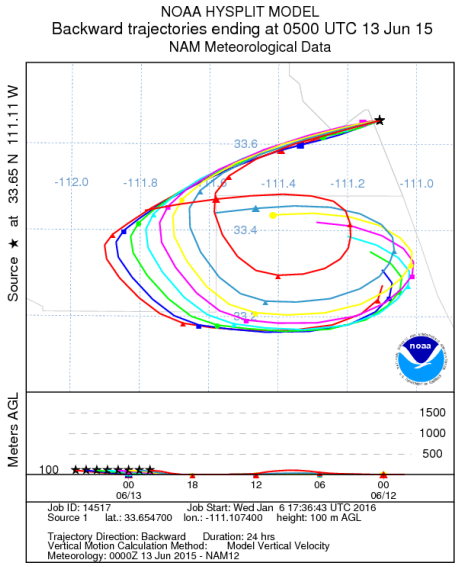


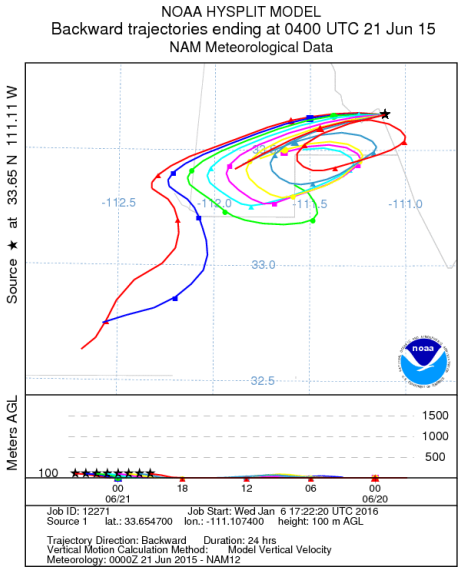




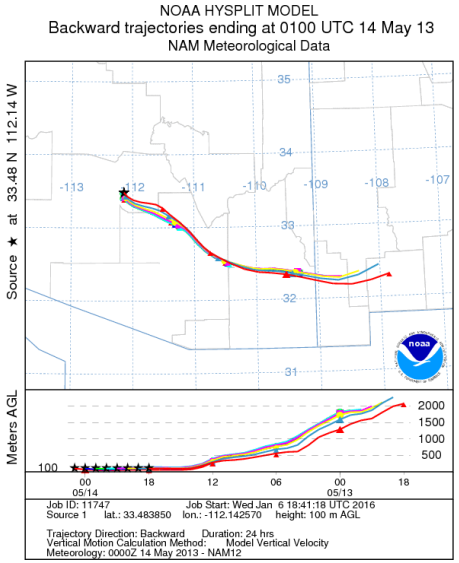

NOAA HYSPLIT MODEL
Backward trajectories ending at 0600 UTC 29 May 15
NAM Meteorological Data
Source ★ at 33.65 N 111.11 W
Meters AGL
Job ID: 14907 Job Start: Wed Jan 6 17:40:30 UTC 2016
Source 1 lat.: 33.654700 lon.: -111.107400 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 29 May 2015 - NAM12

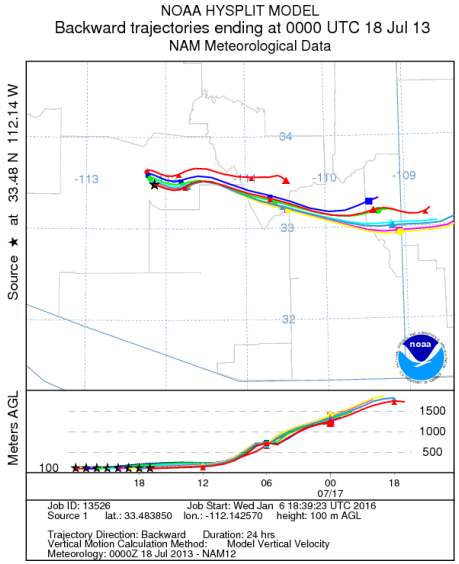

NOAA HYSPLIT MODEL
Backward trajectories ending at 0400 UTC 12 Jun 15
NAM Meteorological Data
Source ★ at 33.65 N 111.11 W
Meters AGL
Job ID: 14146 Job Start: Wed Jan 6 17:26:33 UTC 2016
Source 1 lat.: 33.654700 lon.: -111.107400 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 12 Jun 2015 - NAM12

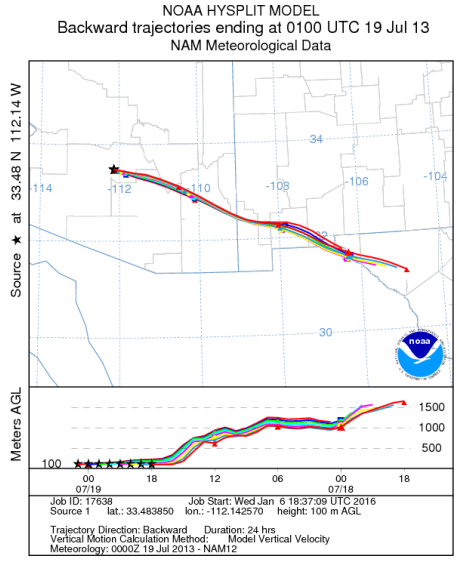

NOAA HYSPLIT MODEL
Backward trajectories ending at 0500 UTC 13 Jun 15
NAM Meteorological Data
Source ★ at 33.65 N 111.11 W
Meters AGL
Job ID: 14517 Job Start: Wed Jan 6 17:36:43 UTC 2016
Source 1 lat.: 33.654700 lon.: -111.107400 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 13 Jun 2015 - NAM12

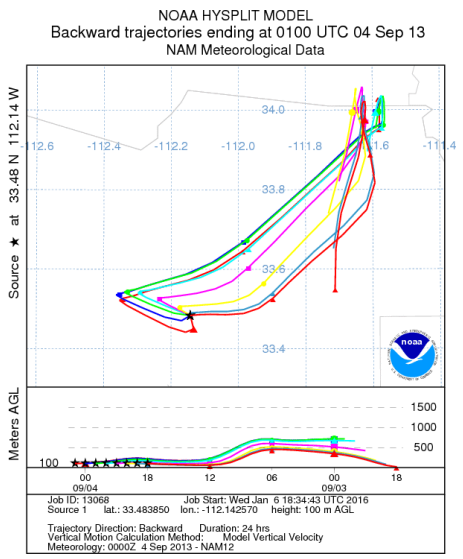

NOAA HYSPLIT MODEL
Backward trajectories ending at 0400 UTC 21 Jun 15
NAM Meteorological Data
Source ★ at 33.65 N 111.11 W
Meters AGL
Job ID: 12271 Job Start: Wed Jan 6 17:22:20 UTC 2016
Source 1 lat.: 33.654700 lon.: -111.107400 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 21 Jun 2015 - NAM12

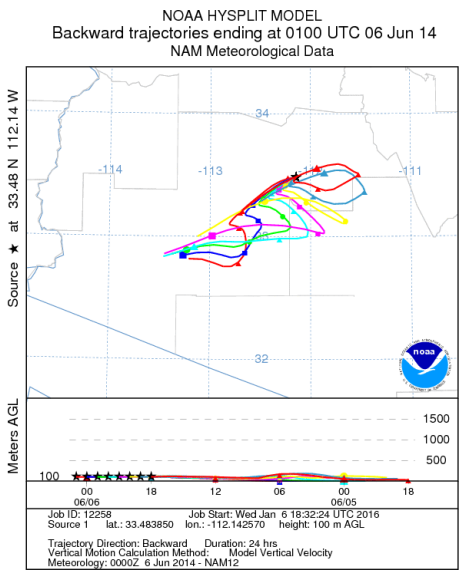
AI2 West Phoenix Monitor – Maricopa County (04-013-0019)

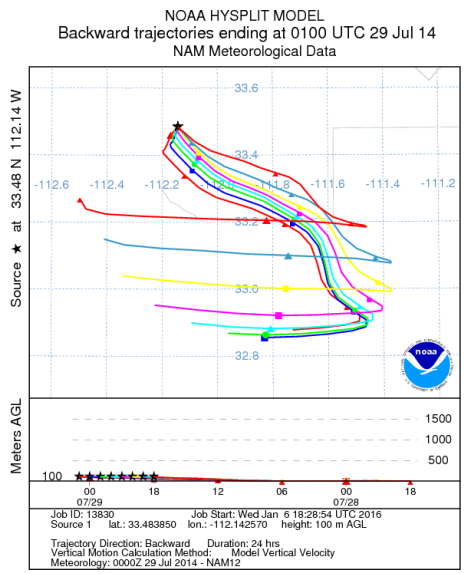


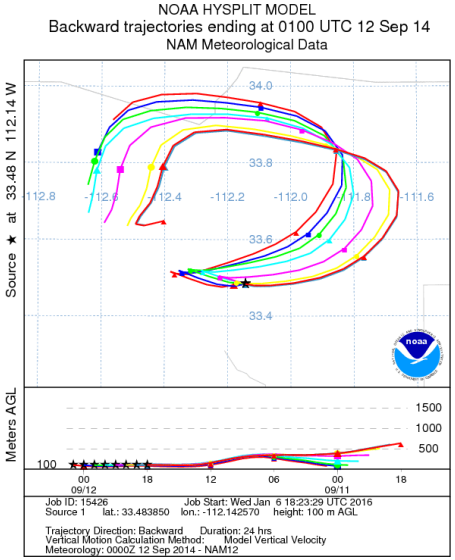


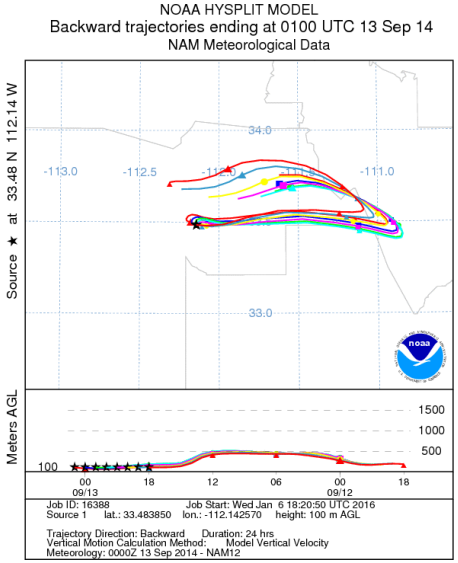


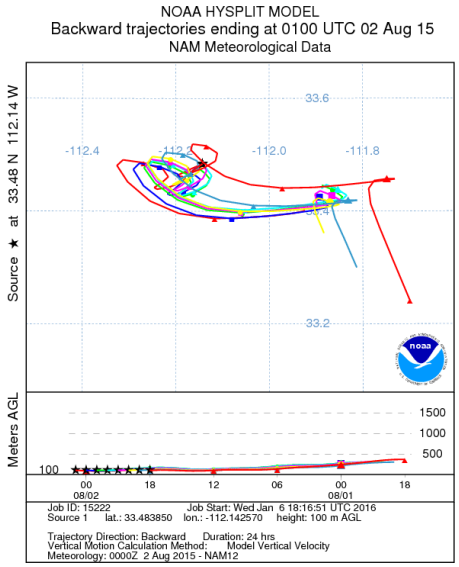


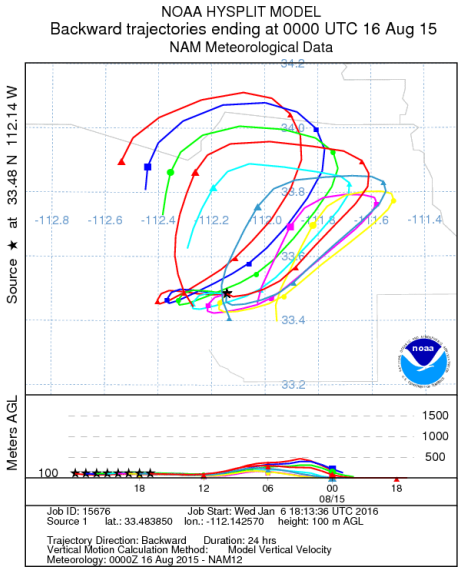




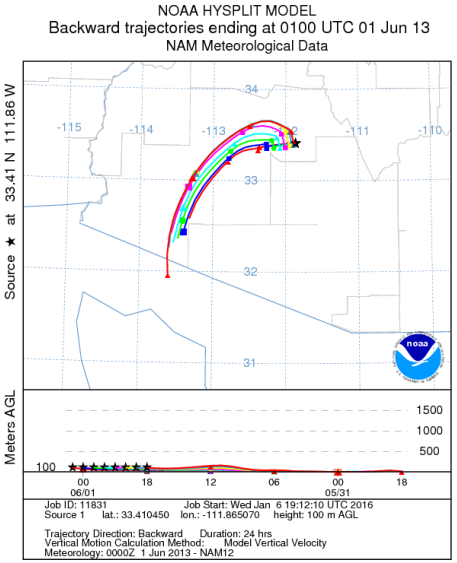

NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 12 Sep 14
NAM Meteorological Data
Source ★ at 33.48 N 112.14 W
Meters AGL
Job ID: 15426 Job Start: Wed Jan 6 18:23:29 UTC 2016
Source 1 lat.: 33.483850 lon.: -112.142570 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 12 Sep 2014 - NAM12

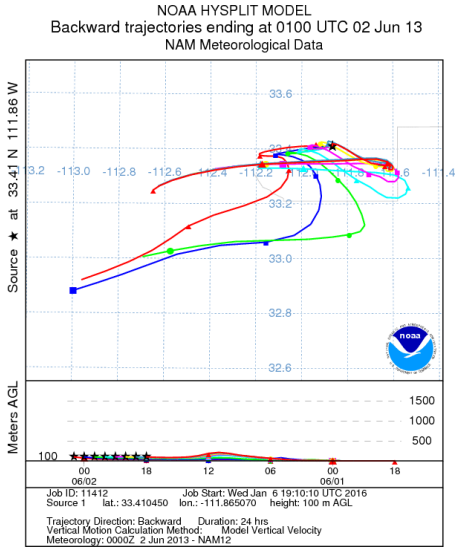

NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 13 Sep 14
NAM Meteorological Data
Source ★ at 33.48 N 112.14 W
Meters AGL
Job ID: 16388 Job Start: Wed Jan 6 18:20:50 UTC 2016
Source 1 lat.: 33.483850 lon.: -112.142570 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 13 Sep 2014 - NAM12

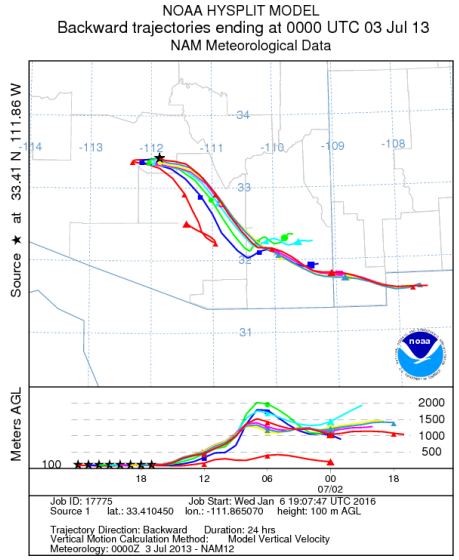

NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 02 Aug 15
NAM Meteorological Data
Source ★ at 33.48 N 112.14 W
Meters AGL
Job ID: 15222 Job Start: Wed Jan 6 18:16:51 UTC 2016
Source 1 lat.: 33.483850 lon.: -112.142570 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 2 Aug 2015 - NAM12

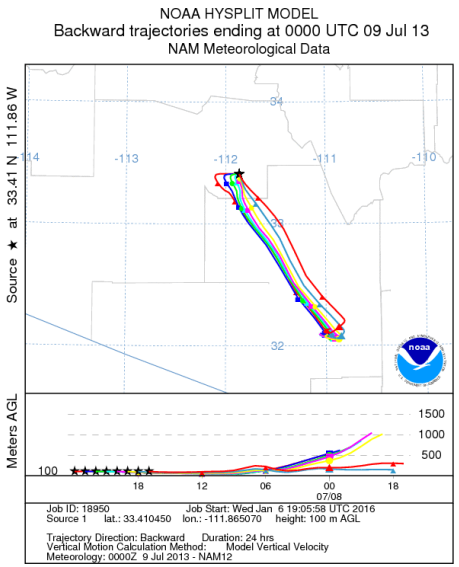

NOAA HYSPLIT MODEL
Backward trajectories ending at 0000 UTC 16 Aug 15
NAM Meteorological Data
Source ★ at 33.48 N 112.14 W
Meters AGL
Job ID: 15676 Job Start: Wed Jan 6 18:13:36 UTC 2016
Source 1 lat.: 33.483850 lon.: -112.142570 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 16 Aug 2015 - NAM12

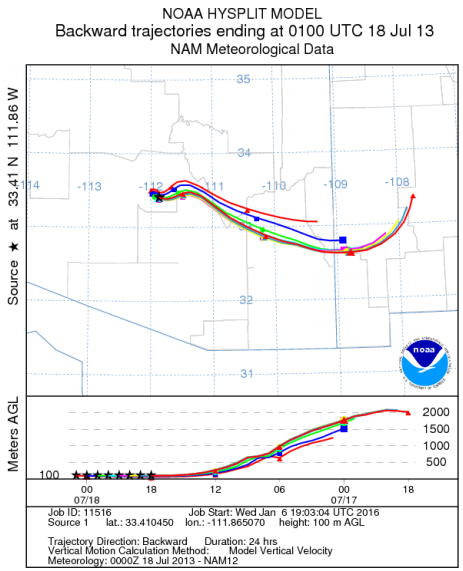
AI3 Mesa Monitor – Maricopa County (04-013-1003)

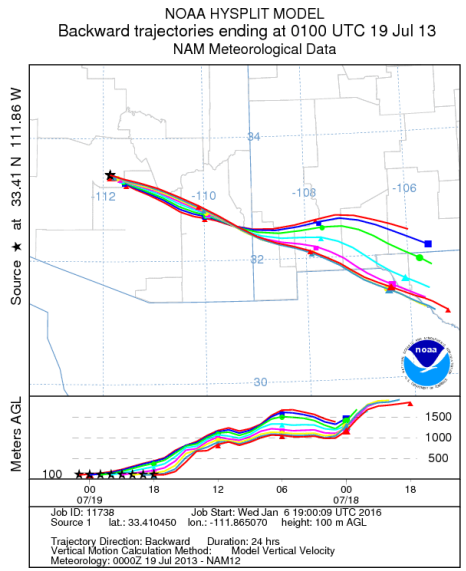


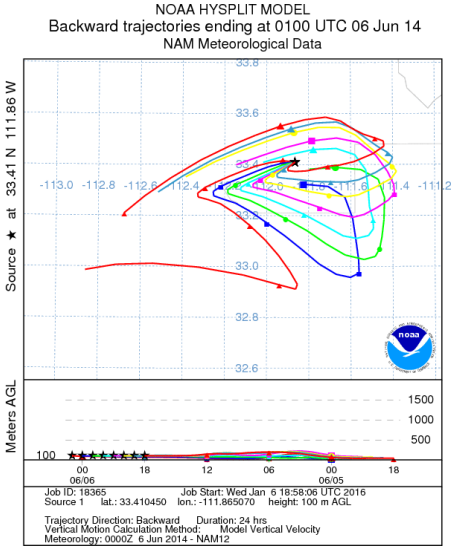


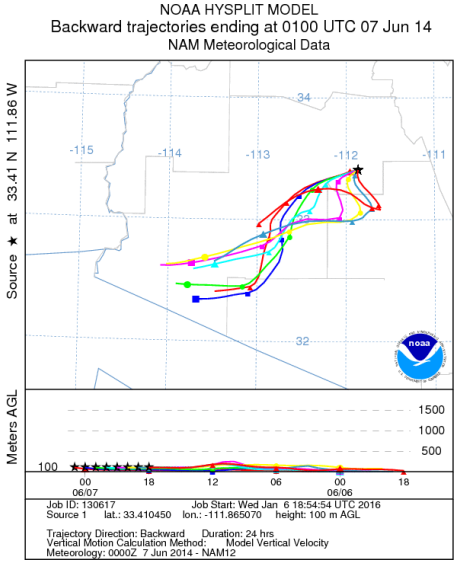


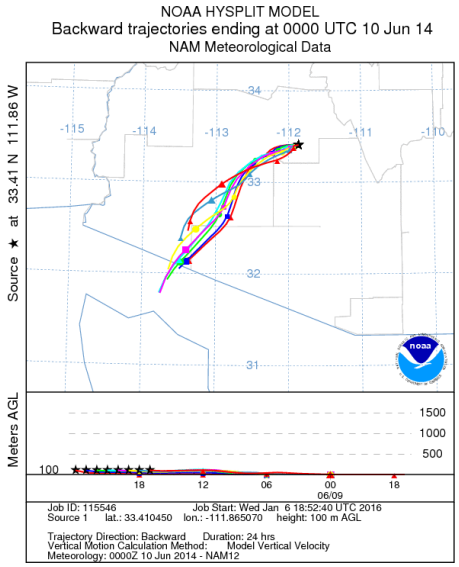


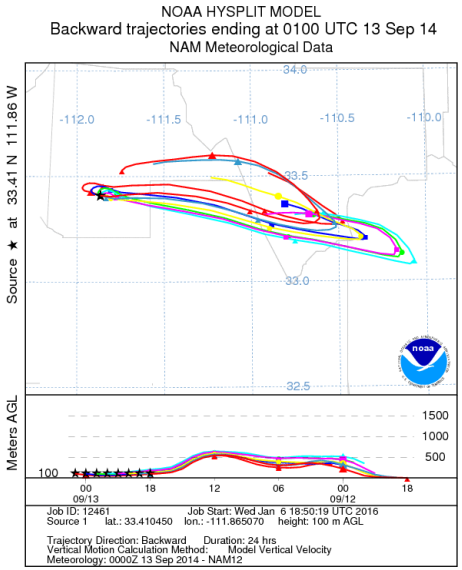




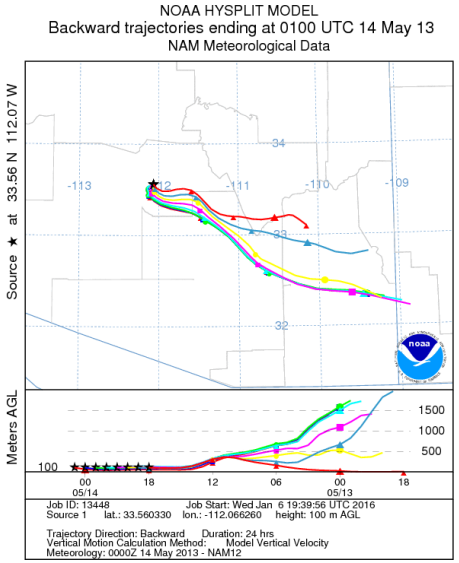

NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 06 Jun 14
NAM Meteorological Data
Source ★ at 33.41 N 111.86 W
Meters AGL
Job ID: 18365 Job Start: Wed Jan 6 18:58:06 UTC 2016
Source 1 lat.: 33.410450 lon.: -111.865070 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 6 Jun 2014 - NAM12

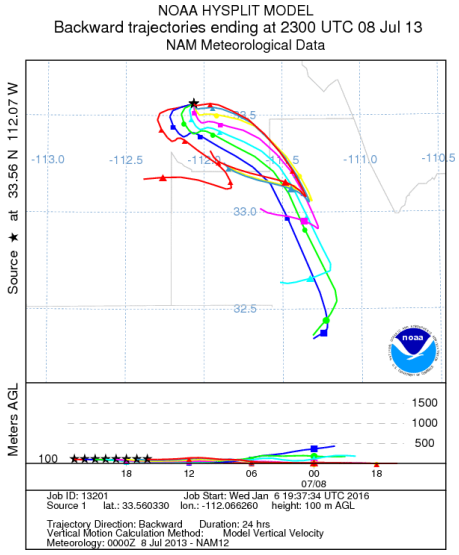

NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 07 Jun 14
NAM Meteorological Data
Source ★ at 33.41 N 111.86 W
Meters AGL
Job ID: 130617 Job Start: Wed Jan 6 18:54:54 UTC 2016
Source 1 lat.: 33.410450 lon.: -111.865070 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 7 Jun 2014 - NAM12

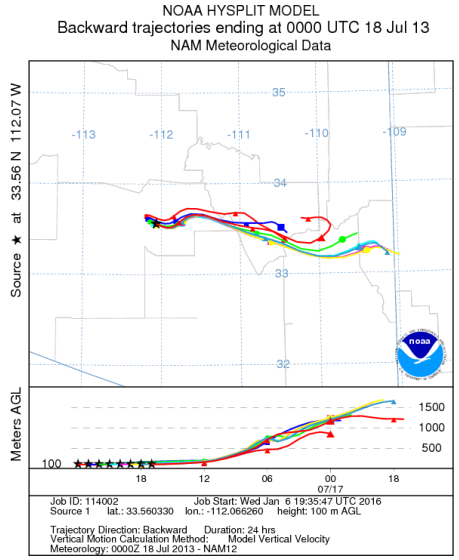

NOAA HYSPLIT MODEL
Backward trajectories ending at 0000 UTC 10 Jun 14
NAM Meteorological Data
Source ★ at 33.41 N 111.86 W
Meters AGL
Job ID: 115546 Job Start: Wed Jan 6 18:52:40 UTC 2016
Source 1 lat.: 33.410450 lon.: -111.865070 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 10 Jun 2014 - NAM12

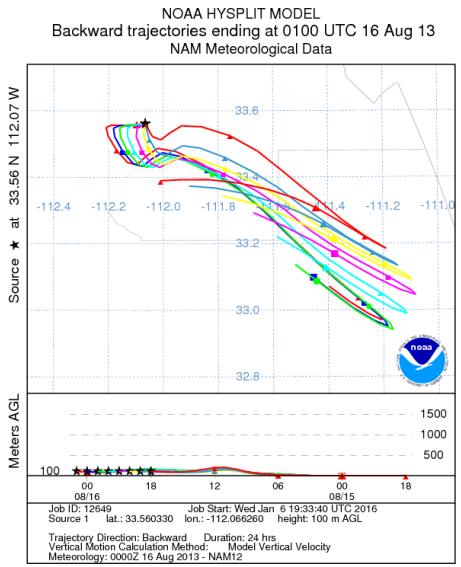

NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 13 Sep 14
NAM Meteorological Data
Source ★ at 33.41 N 111.86 W
Meters AGL
Job ID: 12461 Job Start: Wed Jan 6 18:50:19 UTC 2016
Source 1 lat.: 33.410450 lon.: -111.865070 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 13 Sep 2014 - NAM12

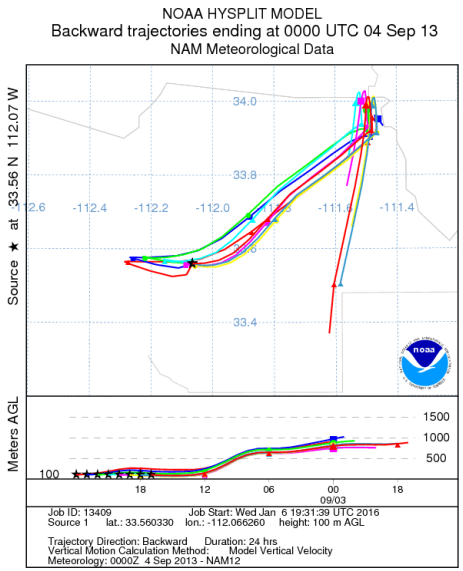
AI4 North Phoenix Monitor – Maricopa County (04-013-1004)

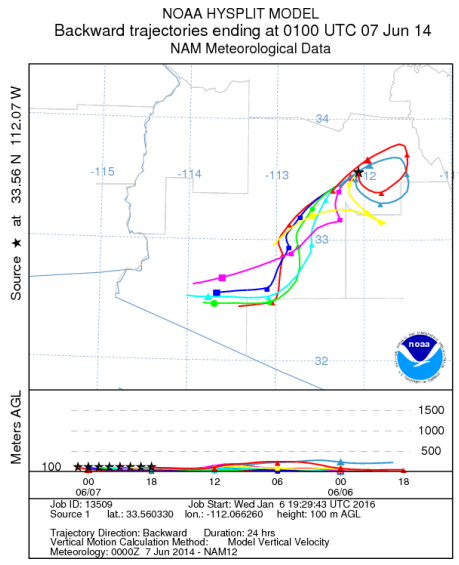


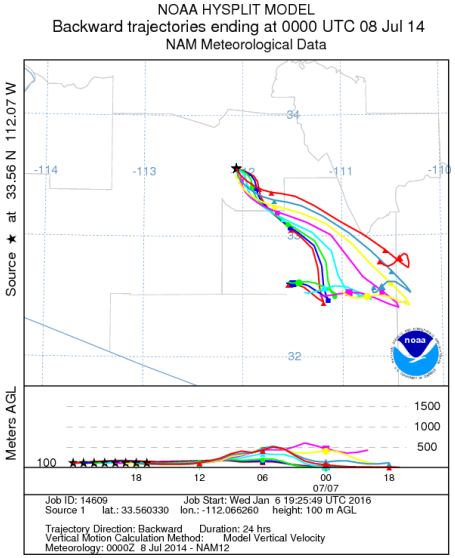


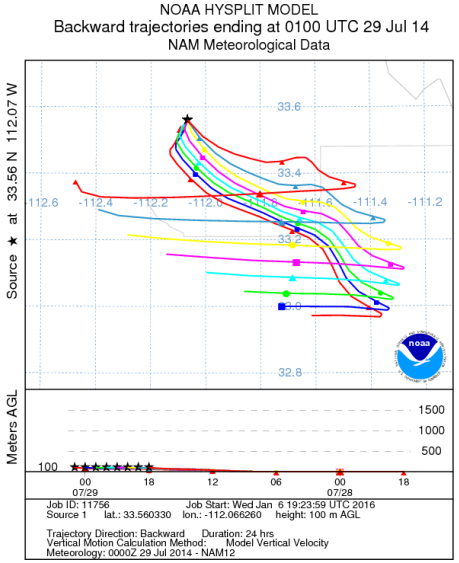


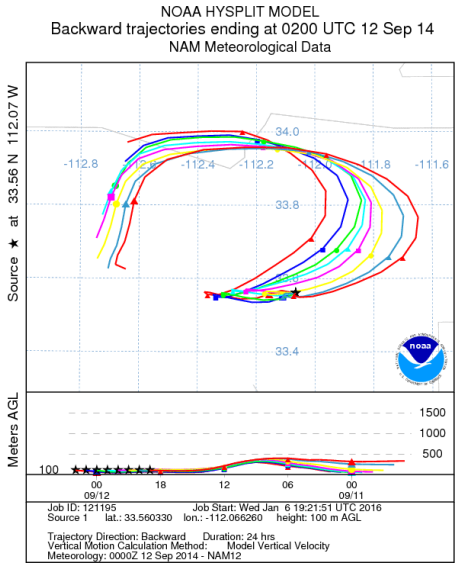


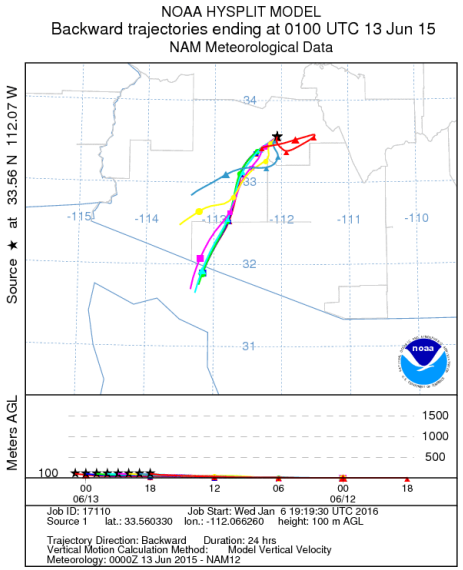




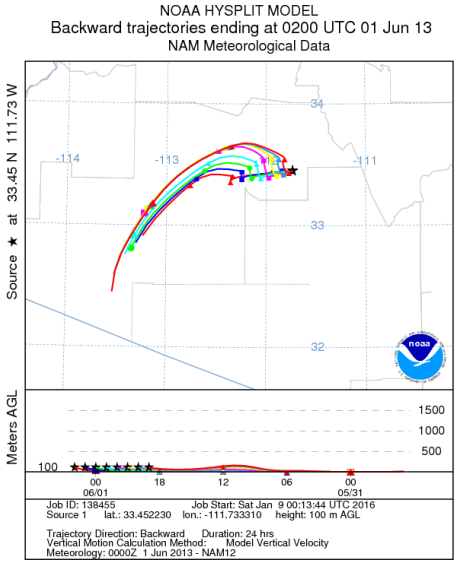

NOAA HYSPLIT MODEL
Backward trajectories ending at 0000 UTC 08 Jul 14
NAM Meteorological Data
Source ★ at 33.56 N 112.07 W
Meters AGL
Job ID: 14609 Job Start: Wed Jan 6 19:25:49 UTC 2016
Source 1 lat.: 33.560330 lon.: -112.066260 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 8 Jul 2014 - NAM12

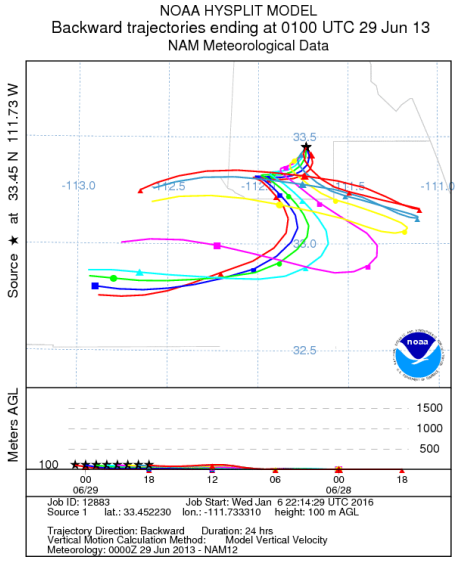

NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 29 Jul 14
NAM Meteorological Data
Source ★ at 33.56 N 112.07 W
Meters AGL
Job ID: 11756 Job Start: Wed Jan 6 19:23:59 UTC 2016
Source 1 lat.: 33.560330 lon.: -112.066260 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 29 Jul 2014 - NAM12

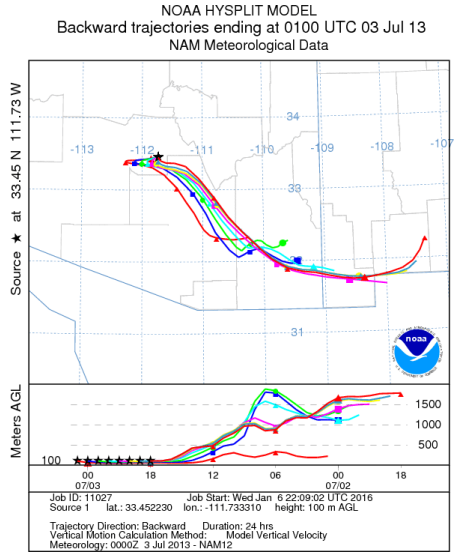

NOAA HYSPLIT MODEL
Backward trajectories ending at 0200 UTC 12 Sep 14
NAM Meteorological Data
Source ★ at 33.56 N 112.07 W
Meters AGL
Job ID: 12195 Job Start: Wed Jan 6 19:21:51 UTC 2016
Source 1 lat.: 33.560330 lon.: -112.066260 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 12 Sep 2014 - NAM12

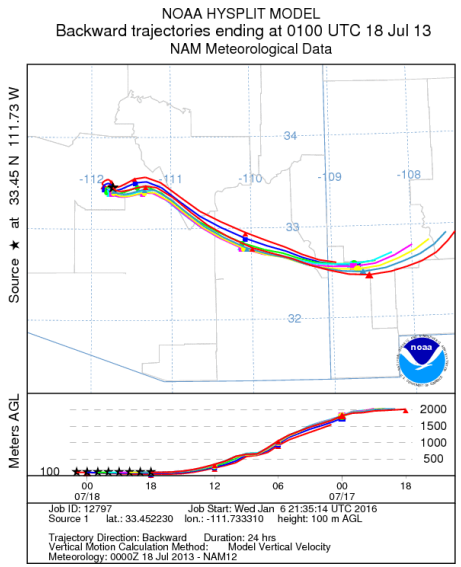

NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 13 Jun 15
NAM Meteorological Data
Source ★ at 33.56 N 112.07 W
Meters AGL
Job ID: 17110 Job Start: Wed Jan 6 19:19:30 UTC 2016
Source 1 lat.: 33.560330 lon.: -112.066260 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 13 Jun 2015 - NAM12

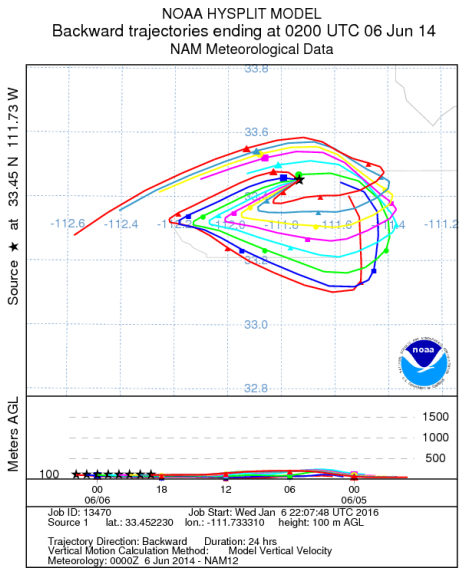
AI5 Falcon Field Monitor – Maricopa County (04-013-1010)

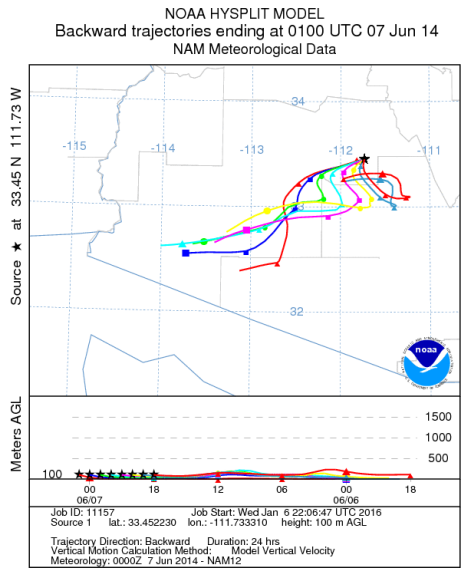


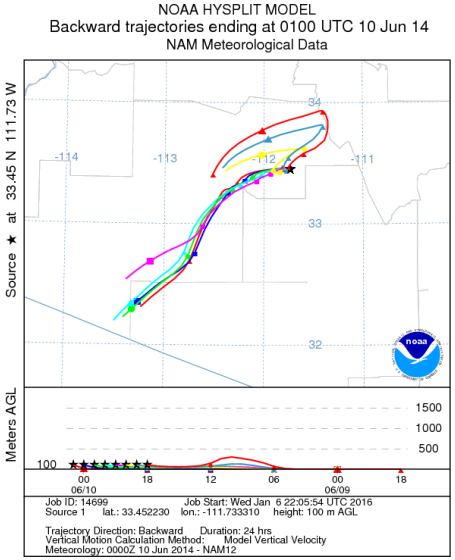


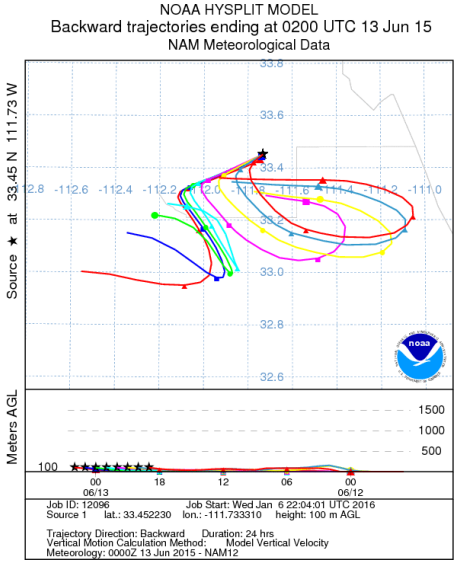


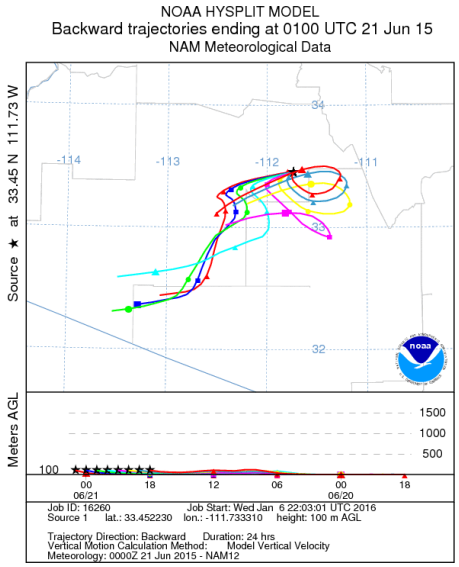


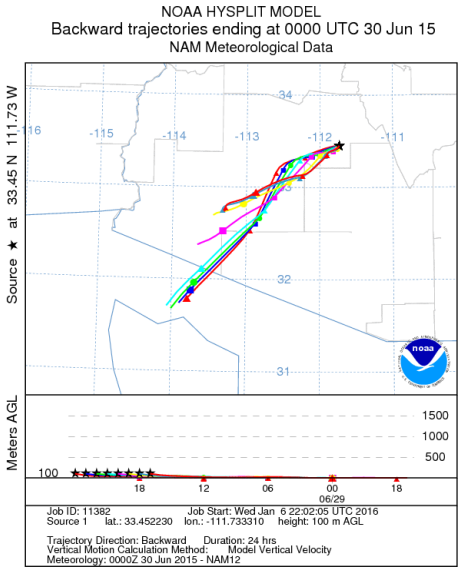




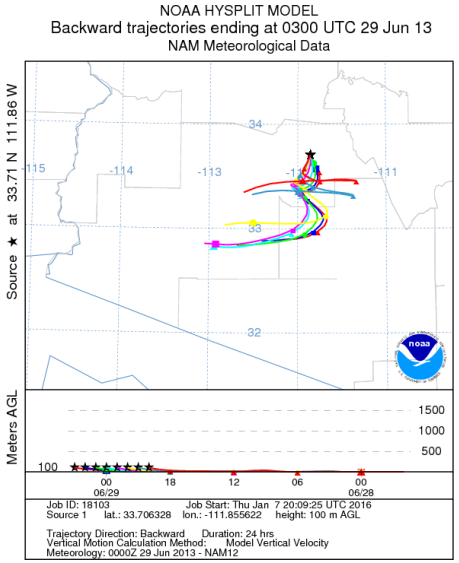

NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 10 Jun 14
NAM Meteorological Data
Source ★ at 33.45 N 111.73 W
Meters AGL
Job ID: 14699 Job Start: Wed Jan 6 22:05:54 UTC 2016
Source 1 lat.: 33.452230 lon.: -111.733310 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 10 Jun 2014 - NAM12

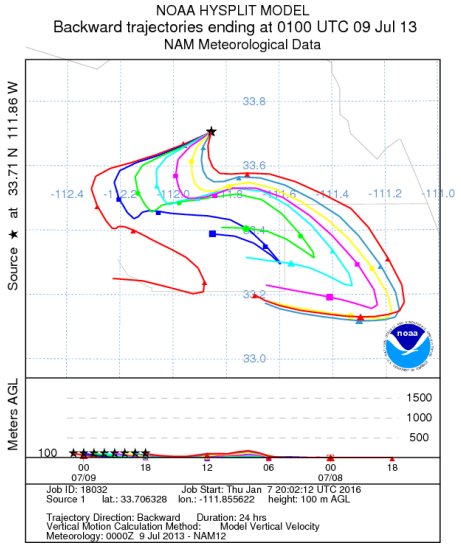

NOAA HYSPLIT MODEL
Backward trajectories ending at 0200 UTC 13 Jun 15
NAM Meteorological Data
Source ★ at 33.45 N 111.73 W
Meters AGL
Job ID: 12096 Job Start: Wed Jan 6 22:04:01 UTC 2016
Source 1 lat.: 33.452230 lon.: -111.733310 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 13 Jun 2015 - NAM12

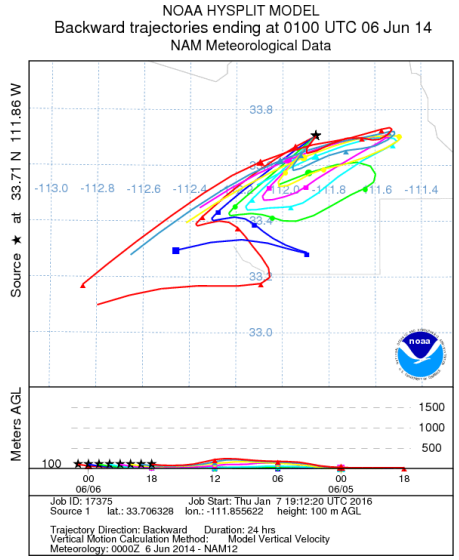

NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 21 Jun 15
NAM Meteorological Data
Source ★ at 33.45 N 111.73 W
Meters AGL
Job ID: 16260 Job Start: Wed Jan 6 22:03:01 UTC 2016
Source 1 lat.: 33.452230 lon.: -111.733310 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 21 Jun 2015 - NAM12

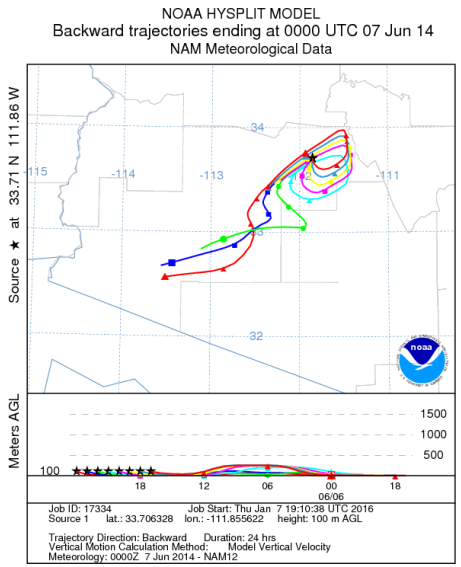

NOAA HYSPLIT MODEL
Backward trajectories ending at 0000 UTC 30 Jun 15
NAM Meteorological Data
Source ★ at 33.45 N 111.73 W
Meters AGL
Job ID: 11382 Job Start: Wed Jan 6 22:02:05 UTC 2016
Source 1 lat.: 33.452230 lon.: -111.733310 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 30 Jun 2015 - NAM12

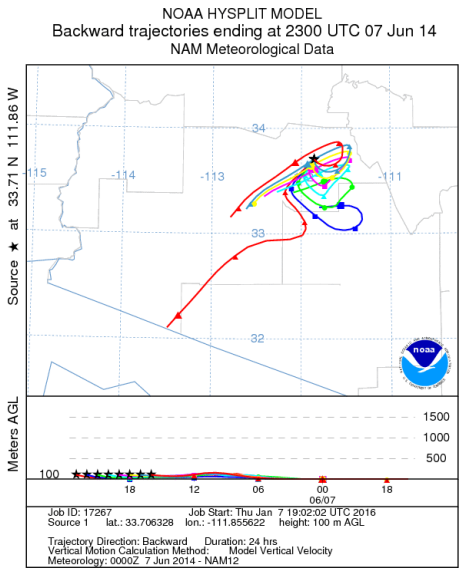
AI6 Pinnacle Peak Monitor – Maricopa County (04-013-2005)

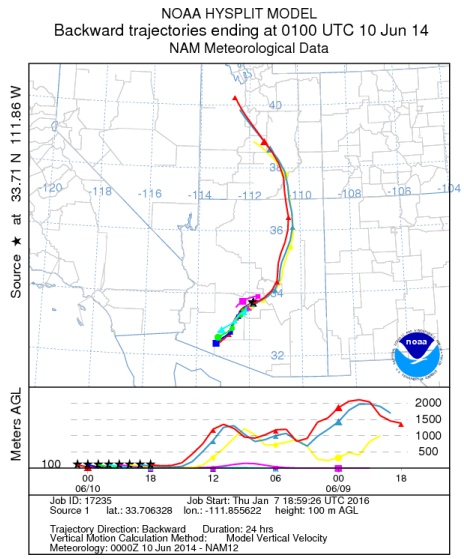


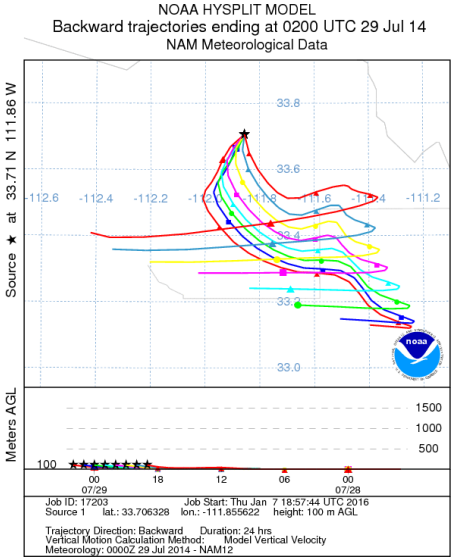


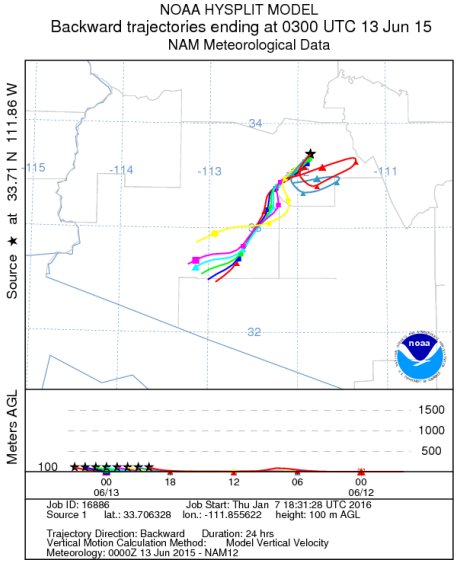


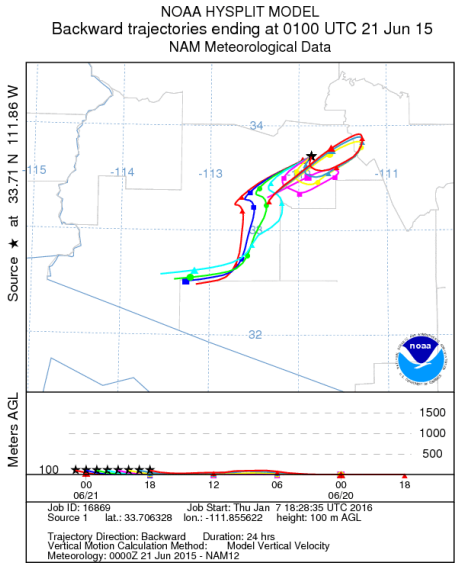


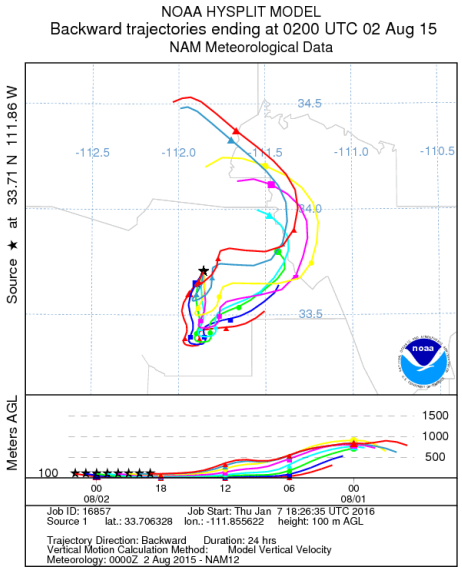




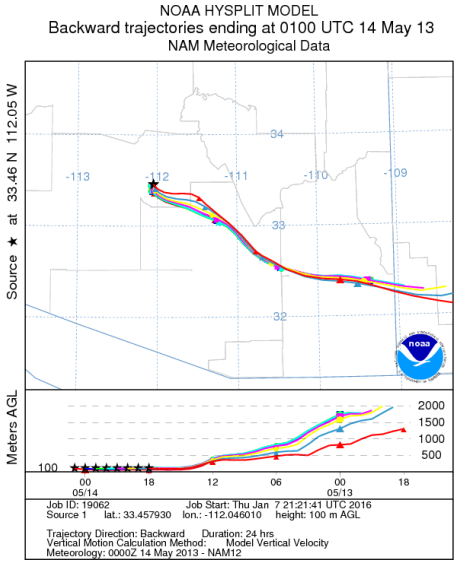

NOAA HYSPLIT MODEL
Backward trajectories ending at 0200 UTC 29 Jul 14
NAM Meteorological Data
Source ★ at 33.71 N 111.86 W
Meters AGL
Job ID: 17203 Job Start: Thu Jan 7 18:57:44 UTC 2016
Source 1 lat.: 33.706328 lon.: -111.855622 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 29 Jul 2014 - NAM12

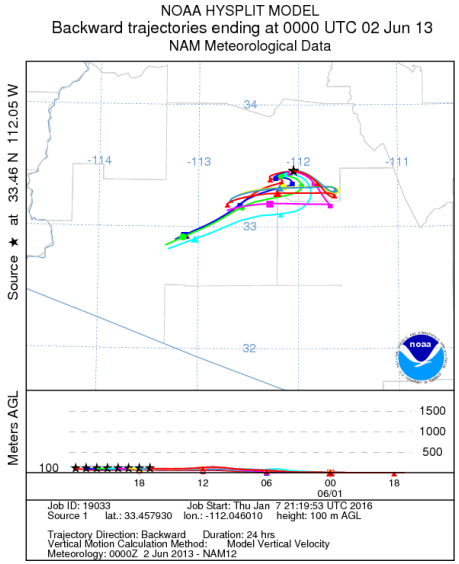

NOAA HYSPLIT MODEL
Backward trajectories ending at 0300 UTC 13 Jun 15
NAM Meteorological Data
Source ★ at 33.71 N 111.86 W
Meters AGL
Job ID: 16886 Job Start: Thu Jan 7 18:31:28 UTC 2016
Source 1 lat.: 33.706328 lon.: -111.855622 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 13 Jun 2015 - NAM12

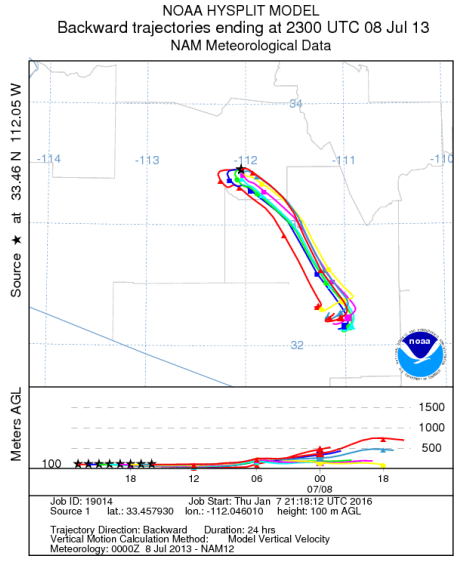

NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 21 Jun 15
NAM Meteorological Data
Source ★ at 33.71 N 111.86 W
Meters AGL
Job ID: 16869 Job Start: Thu Jan 7 18:28:35 UTC 2016
Source 1 lat.: 33.706328 lon.: -111.855622 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 21 Jun 2015 - NAM12

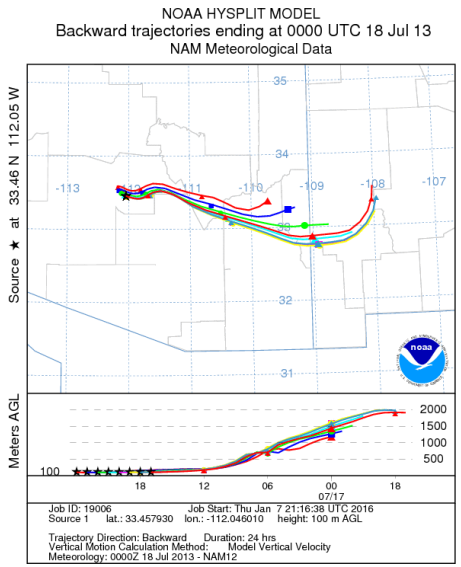

NOAA HYSPLIT MODEL
Backward trajectories ending at 0200 UTC 02 Aug 15
NAM Meteorological Data
Source ★ at 33.71 N 111.86 W
Meters AGL
Job ID: 16857 Job Start: Thu Jan 7 18:26:35 UTC 2016
Source 1 lat.: 33.706328 lon.: -111.855622 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 2 Aug 2015 - NAM12

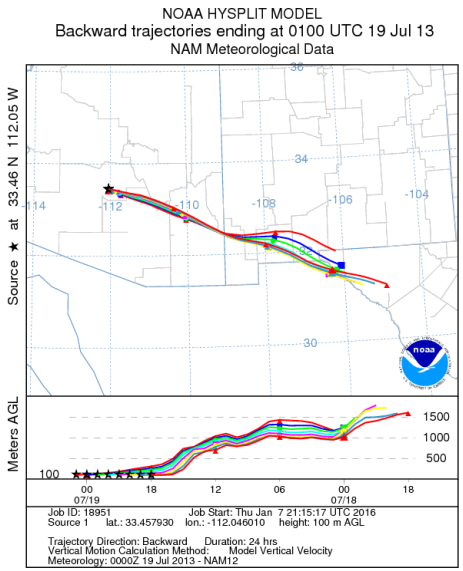
AI7 Central Phoenix Monitor – Maricopa County (04-013-3002)

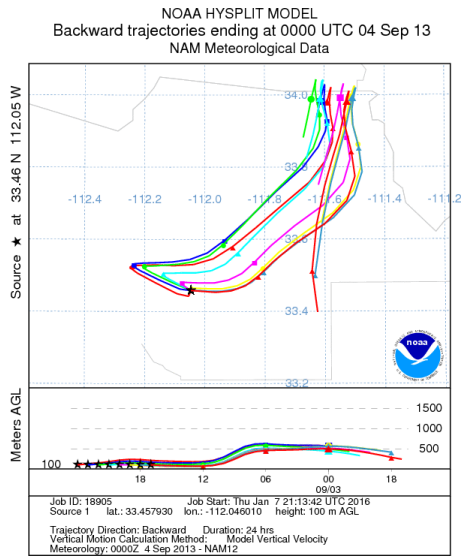


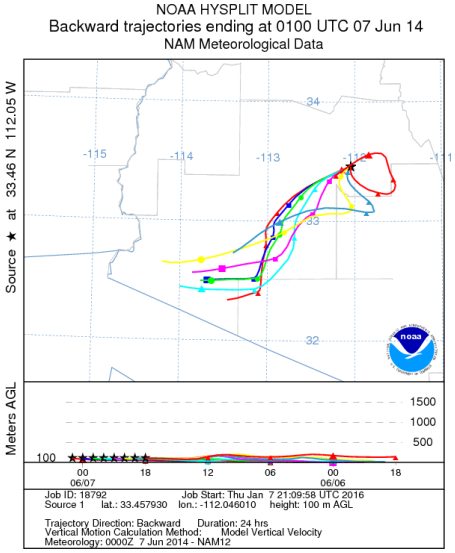


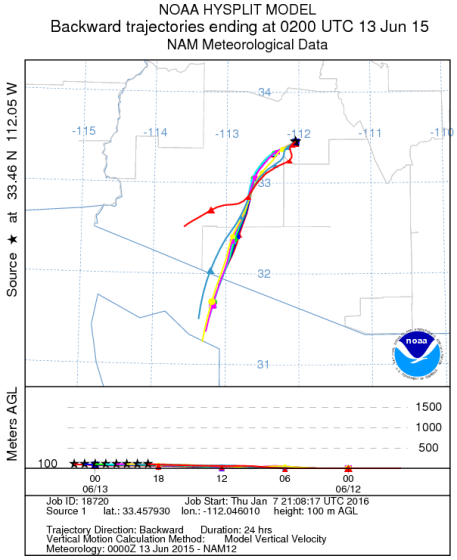


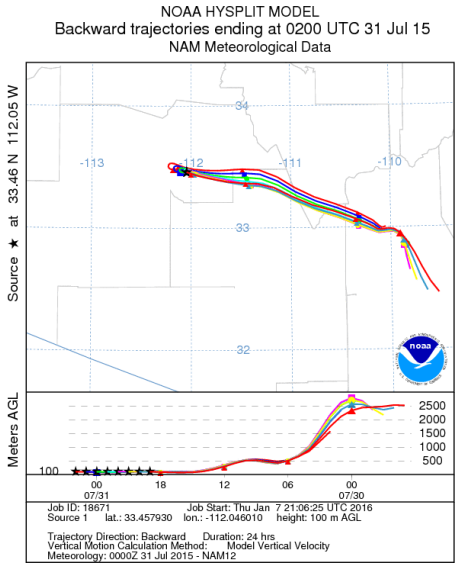


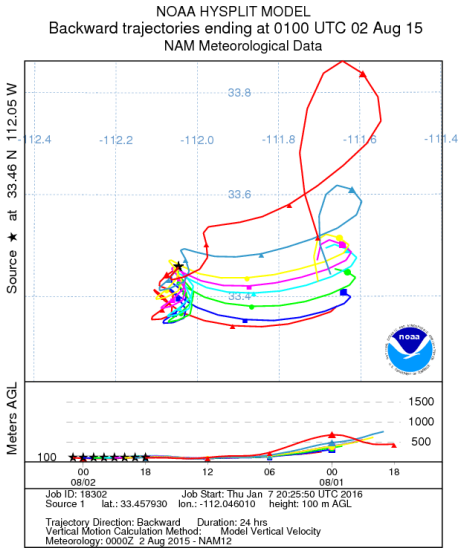




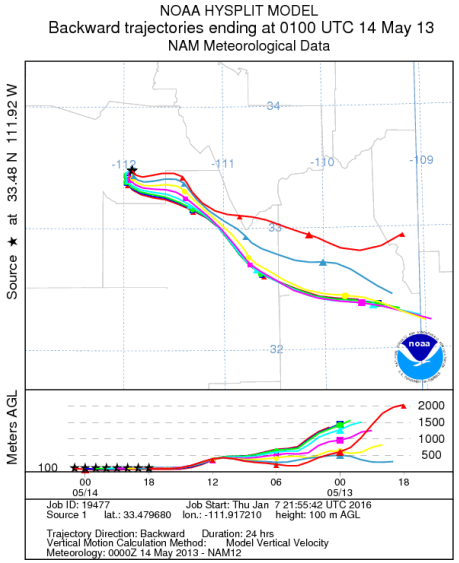

NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 07 Jun 14
NAM Meteorological Data
Source ★ at 33.46 N 112.05 W
Meters AGL
Job ID: 18792 Job Start: Thu Jan 7 21:09:58 UTC 2016
Source 1 lat.: 33.457930 lon.: -112.046010 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 7 Jun 2014 - NAM12

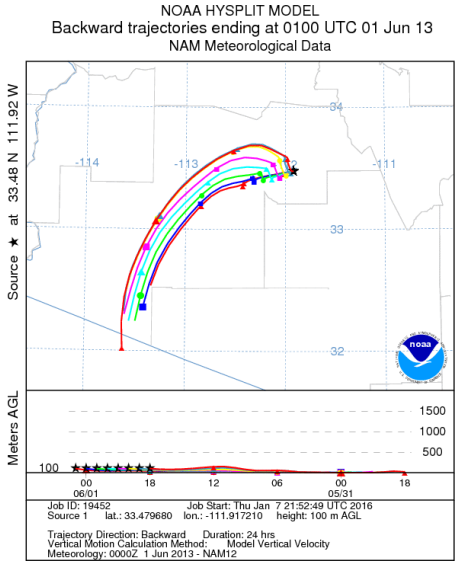

NOAA HYSPLIT MODEL
Backward trajectories ending at 0200 UTC 13 Jun 15
NAM Meteorological Data
Source ★ at 33.46 N 112.05 W
Meters AGL
Job ID: 18720 Job Start: Thu Jan 7 21:08:17 UTC 2016
Source 1 lat.: 33.457930 lon.: -112.046010 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 13 Jun 2015 - NAM12

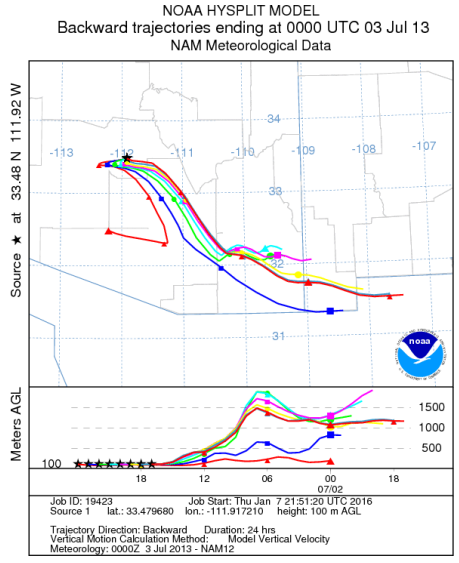

NOAA HYSPLIT MODEL
Backward trajectories ending at 0200 UTC 31 Jul 15
NAM Meteorological Data
Source ★ at 33.46 N 112.05 W
Meters AGL
Job ID: 18671 Job Start: Thu Jan 7 21:06:25 UTC 2016
Source 1 lat.: 33.457930 lon.: -112.046010 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 31 Jul 2015 - NAM12

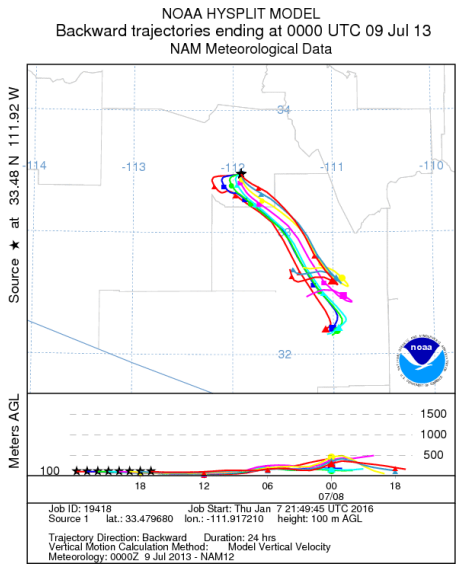

NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 02 Aug 15
NAM Meteorological Data
Source ★ at 33.46 N 112.05 W
Meters AGL
Job ID: 18302 Job Start: Thu Jan 7 20:25:50 UTC 2016
Source 1 lat.: 33.457930 lon.: -112.046010 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 2 Aug 2015 - NAM12

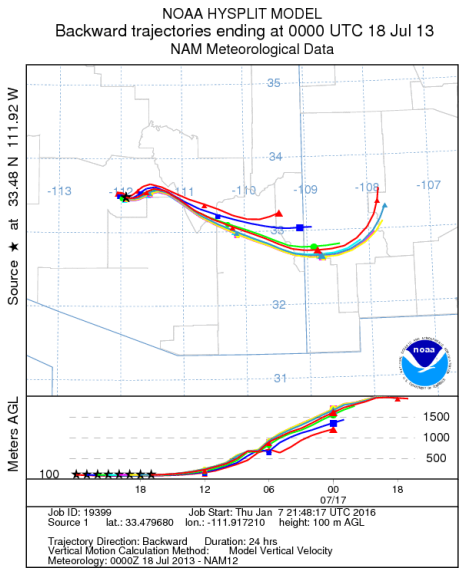
AI8 South Scottsdale Monitor – Maricopa County (04-013-3003)

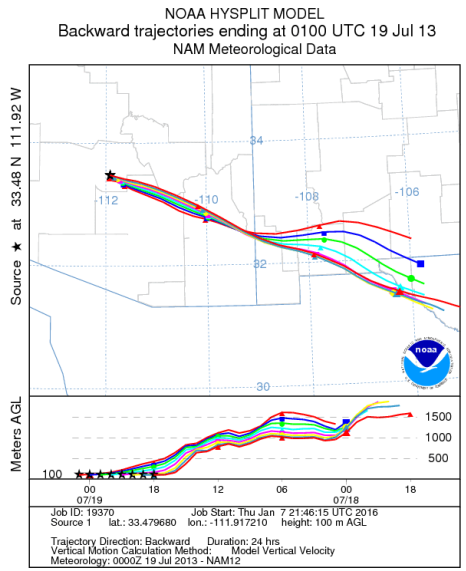


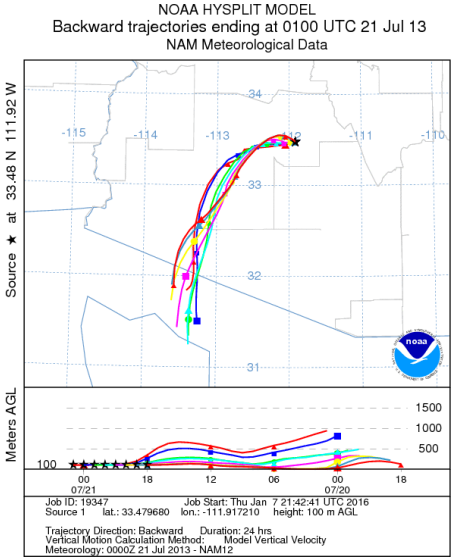


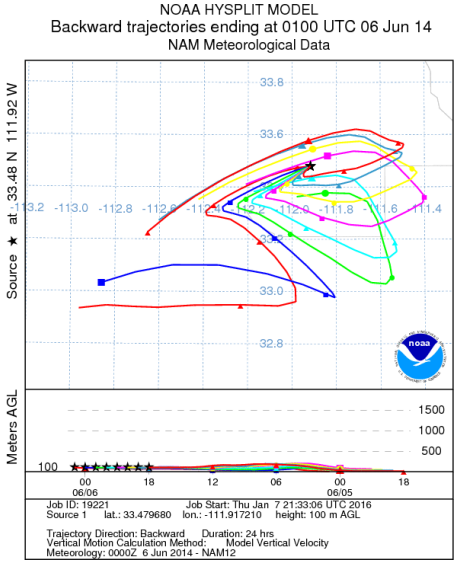


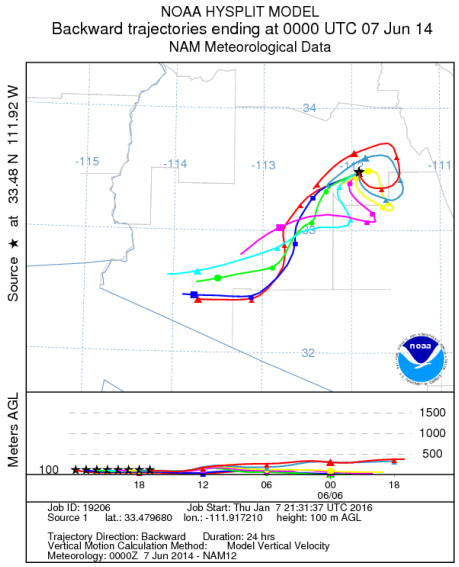


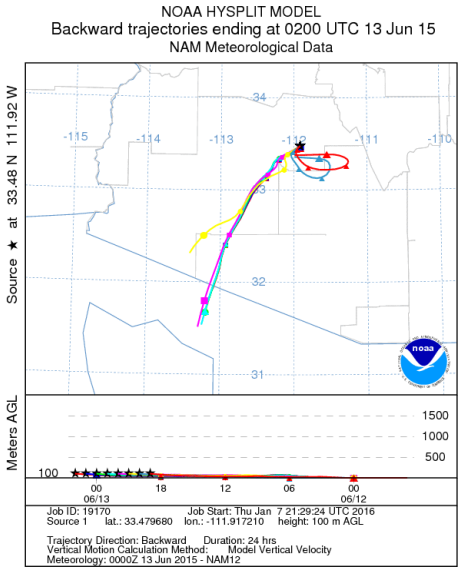




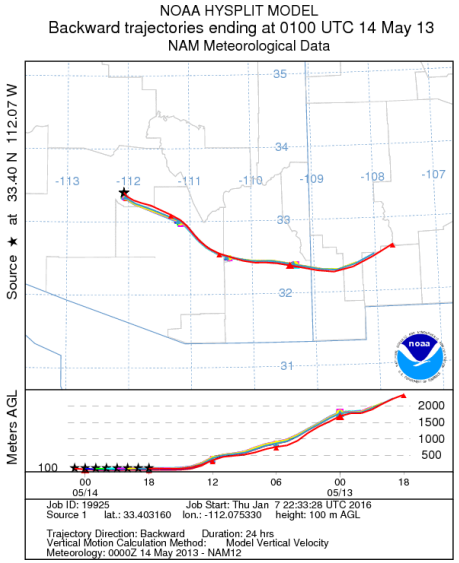

NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 21 Jul 13
NAM Meteorological Data
Source ★ at 33.48 N 111.92 W
Meters AGL
Job ID: 19347 Job Start: Thu Jan 7 21:42:41 UTC 2016
Source 1 lat.: 33.479680 lon.: -111.917210 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 21 Jul 2013 - NAM12

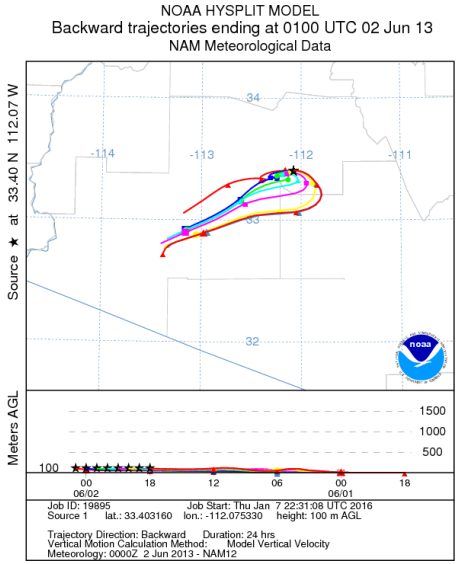

NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 06 Jun 14
NAM Meteorological Data
Source ★ at 33.48 N 111.92 W
Meters AGL
Job ID: 19221 Job Start: Thu Jan 7 21:33:06 UTC 2016
Source 1 lat.: 33.479680 lon.: -111.917210 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 6 Jun 2014 - NAM12

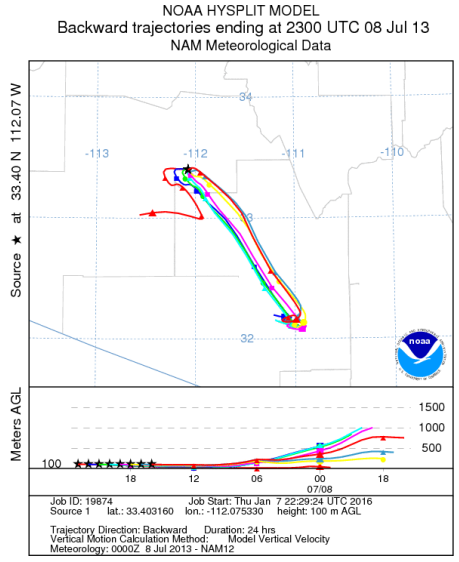

NOAA HYSPLIT MODEL
Backward trajectories ending at 0000 UTC 07 Jun 14
NAM Meteorological Data
Source ★ at 33.48 N 111.92 W
Meters AGL
Job ID: 19206 Job Start: Thu Jan 7 21:31:37 UTC 2016
Source 1 lat.: 33.479680 lon.: -111.917210 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 7 Jun 2014 - NAM12

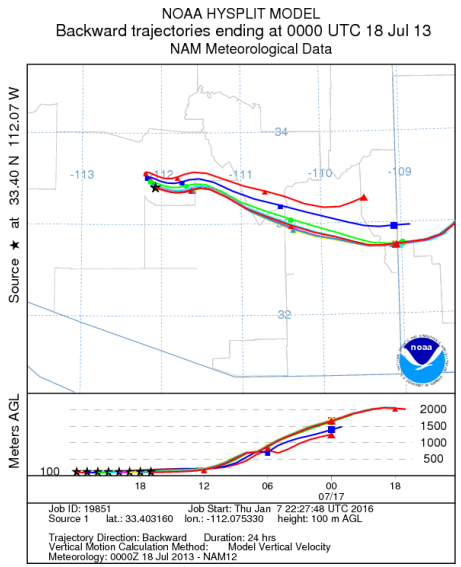

NOAA HYSPLIT MODEL
Backward trajectories ending at 0200 UTC 13 Jun 15
NAM Meteorological Data
Source ★ at 33.48 N 111.92 W
Meters AGL
Job ID: 19170 Job Start: Thu Jan 7 21:29:24 UTC 2016
Source 1 lat.: 33.479680 lon.: -111.917210 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 13 Jun 2015 - NAM12

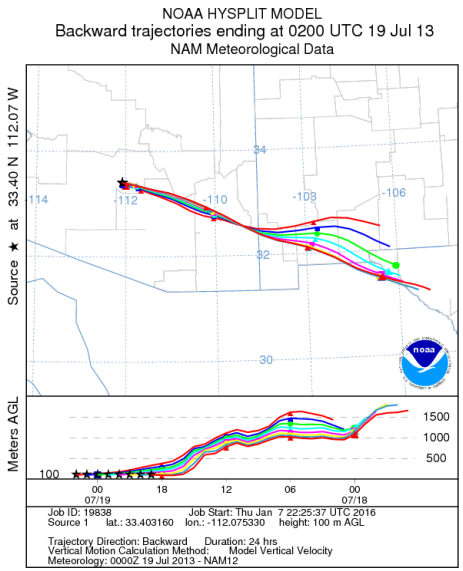
AI9 South Phoenix Monitor – Maricopa County (04-013-4003)

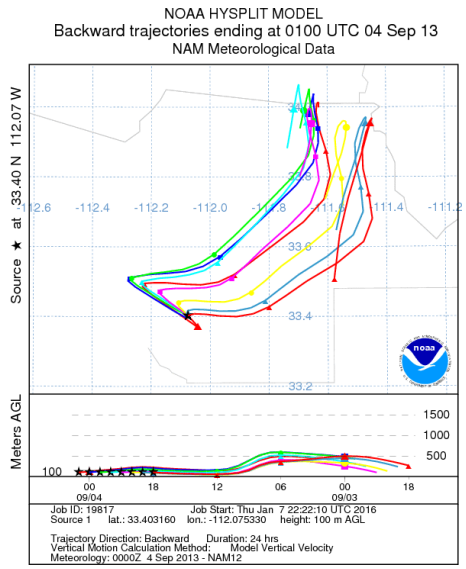


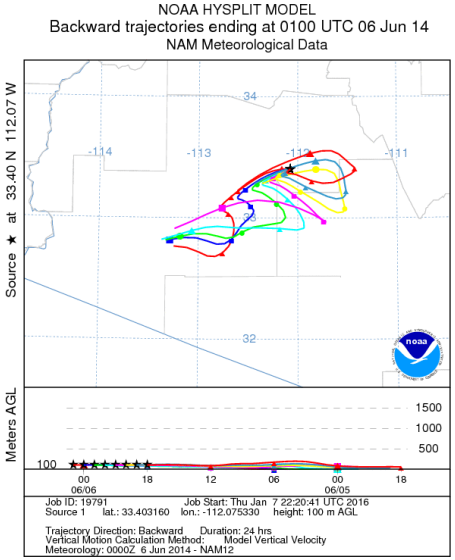


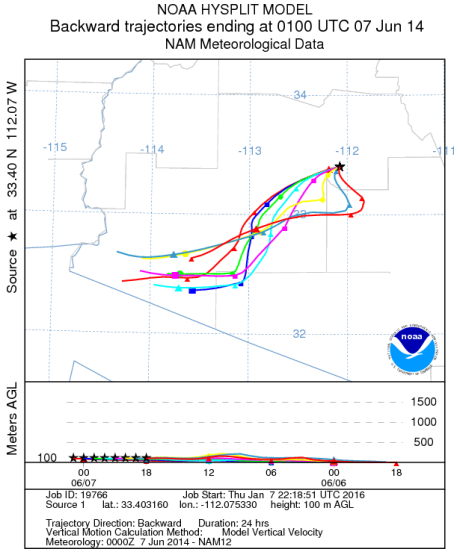


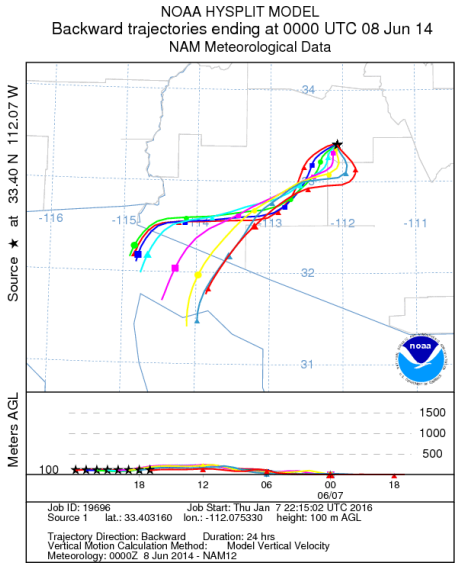


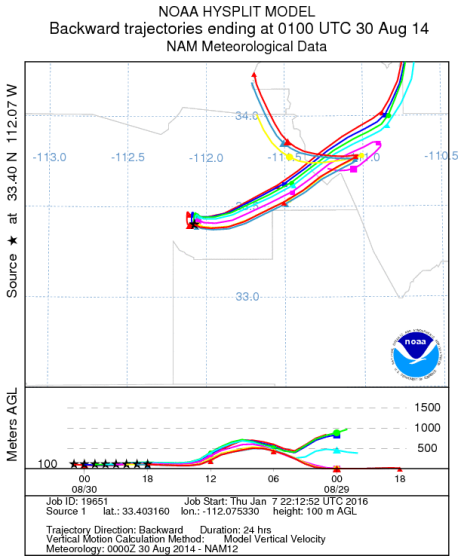




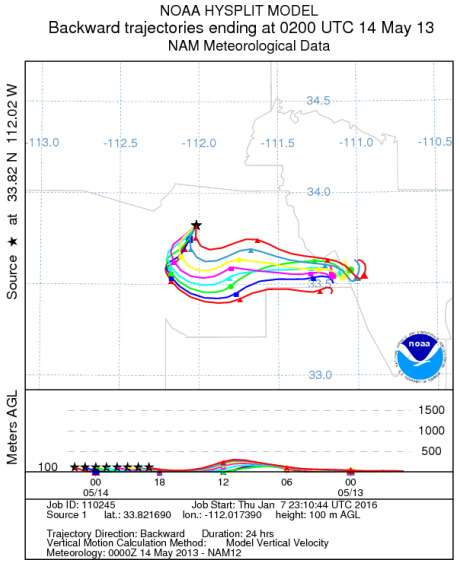

NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 06 Jun 14
NAM Meteorological Data
Source ★ at 33.40 N 112.07 W
Meters AGL
1500
1000
500
100
Job ID: 19791 Job Start: Thu Jan 7 22:20:41 UTC 2016
Source 1 lat.: 33.403160 lon.: -112.075330 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 6 Jun 2014 - NAM12

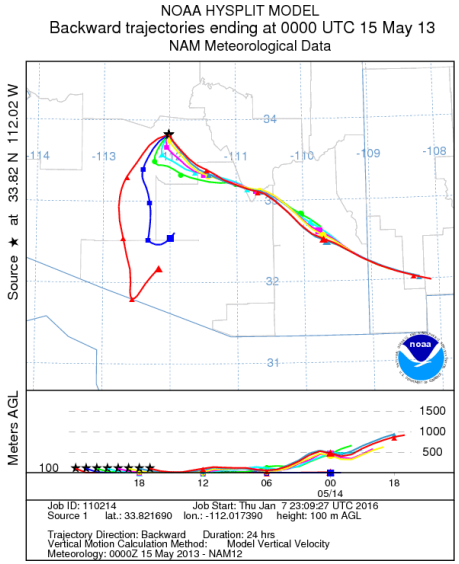

NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 07 Jun 14
NAM Meteorological Data
Source ★ at 33.40 N 112.07 W
Meters AGL
1500
1000
500
100
Job ID: 19766 Job Start: Thu Jan 7 22:18:51 UTC 2016
Source 1 lat.: 33.403160 lon.: -112.075330 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 7 Jun 2014 - NAM12

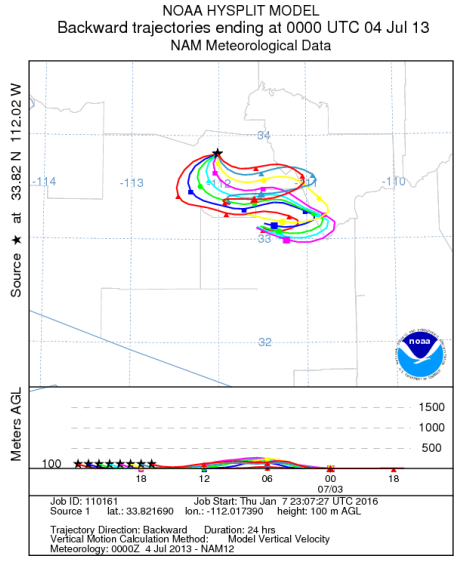

NOAA HYSPLIT MODEL
Backward trajectories ending at 0000 UTC 08 Jun 14
NAM Meteorological Data
Source ★ at 33.40 N 112.07 W
Meters AGL
1500
1000
500
100
Job ID: 19696 Job Start: Thu Jan 7 22:15:02 UTC 2016
Source 1 lat.: 33.403160 lon.: -112.075330 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 8 Jun 2014 - NAM12

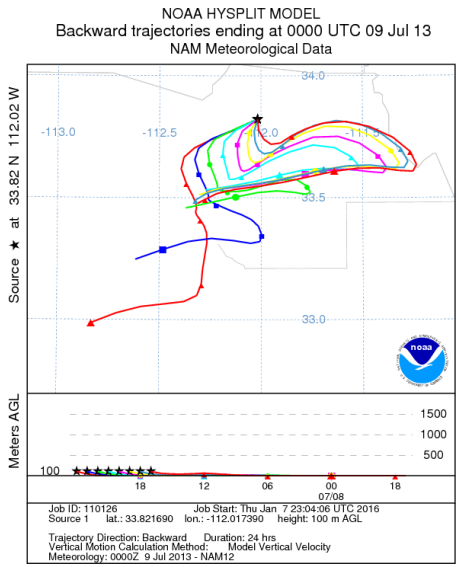

NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 30 Aug 14
NAM Meteorological Data
Source ★ at 33.40 N 112.07 W
Meters AGL
1500
1000
500
100
Job ID: 19651 Job Start: Thu Jan 7 22:12:52 UTC 2016
Source 1 lat.: 33.403160 lon.: -112.075330 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 30 Aug 2014 - NAM12

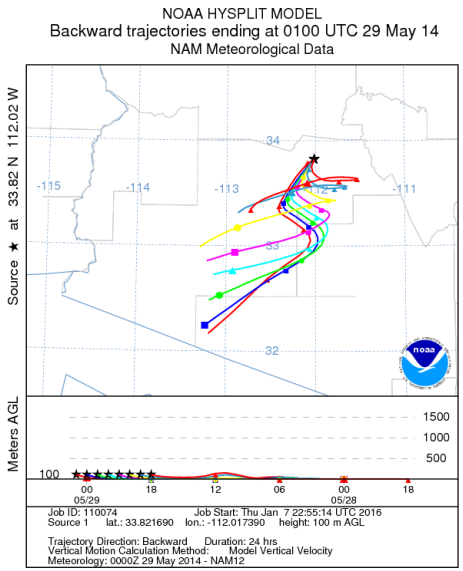
AI10 Cave Creek Monitor – Maricopa County (04-013-4008)

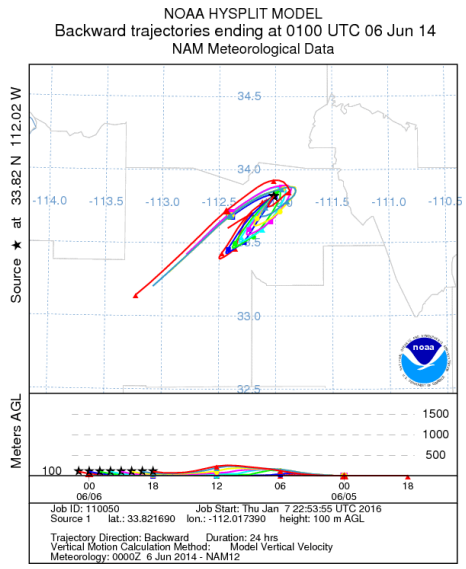


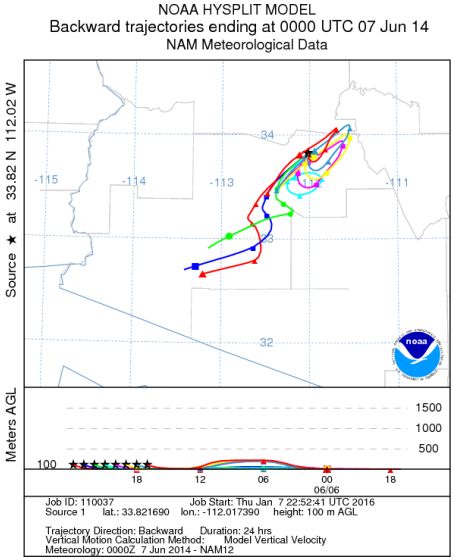


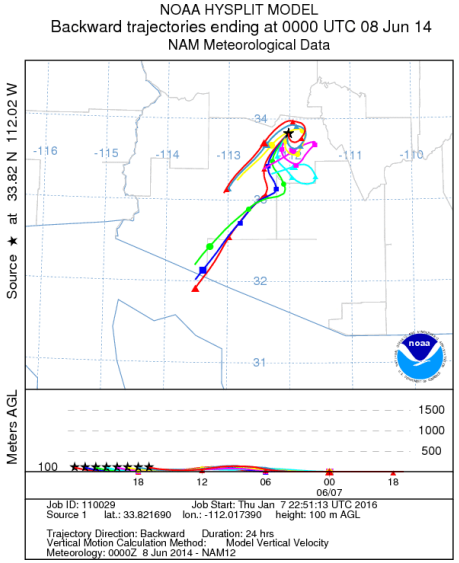


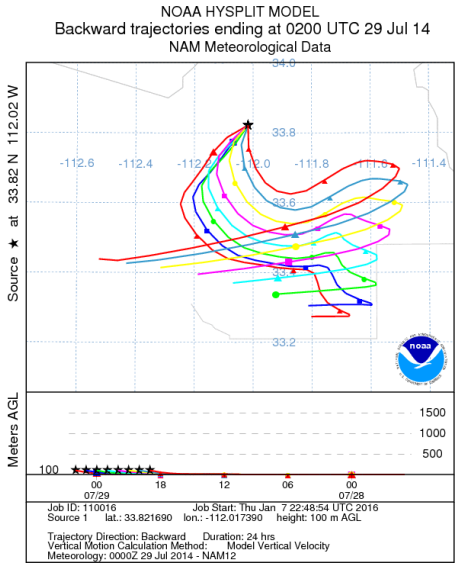


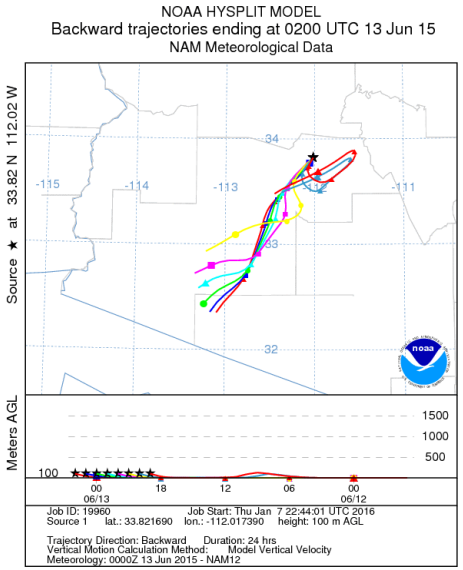




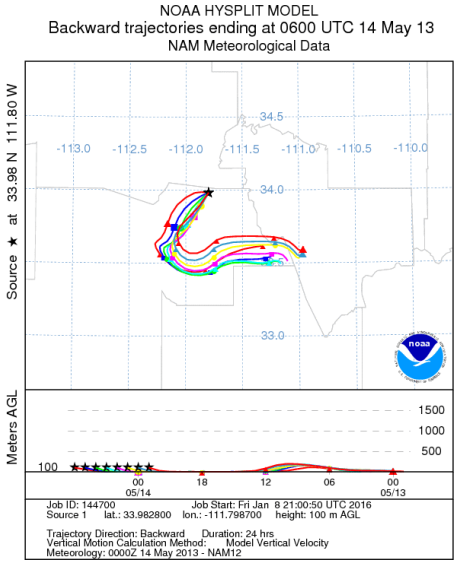

NOAA HYSPLIT MODEL
Backward trajectories ending at 0000 UTC 07 Jun 14
NAM Meteorological Data
Source ★ at 33.82 N 112.02 W
Meters AGL
Job ID: 110037 Job Start: Thu Jan 7 22:52:41 UTC 2016
Source 1 lat.: 33.821690 lon.: -112.017390 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 7 Jun 2014 - NAM12

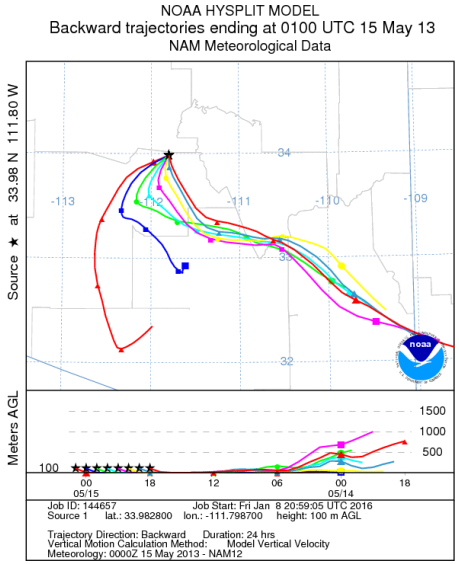

NOAA HYSPLIT MODEL
Backward trajectories ending at 0000 UTC 08 Jun 14
NAM Meteorological Data
Source ★ at 33.82 N 112.02 W
Meters AGL
Job ID: 110029 Job Start: Thu Jan 7 22:51:13 UTC 2016
Source 1 lat.: 33.821690 lon.: -112.017390 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Motion Method: Model Vertical Velocity
Meteorology: 0000Z 8 Jun 2014 - NAM12

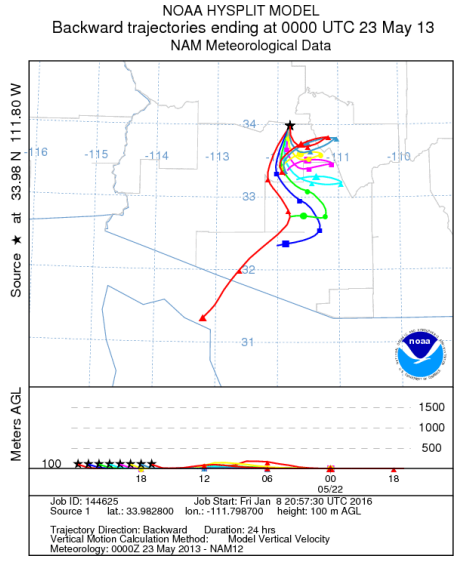

NOAA HYSPLIT MODEL
Backward trajectories ending at 0200 UTC 29 Jul 14
NAM Meteorological Data
Source ★ at 33.82 N 112.02 W
Meters AGL
Job ID: 110016 Job Start: Thu Jan 7 22:48:54 UTC 2016
Source 1 lat.: 33.821690 lon.: -112.017390 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 29 Jul 2014 - NAM12

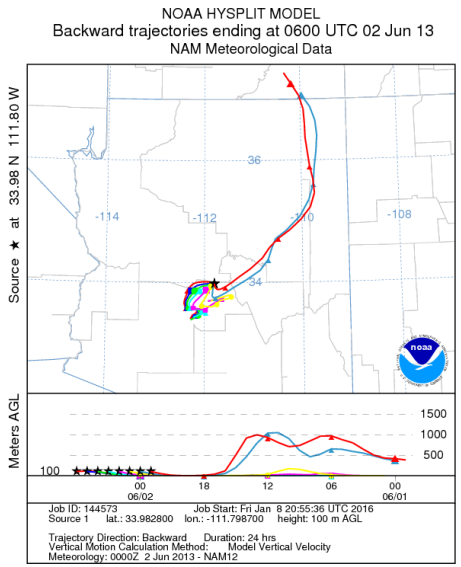

NOAA HYSPLIT MODEL
Backward trajectories ending at 0200 UTC 13 Jun 15
NAM Meteorological Data
Source ★ at 33.82 N 112.02 W
Meters AGL
Job ID: 19960 Job Start: Thu Jan 7 22:44:01 UTC 2016
Source 1 lat.: 33.821690 lon.: -112.017390 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 13 Jun 2015 - NAM12

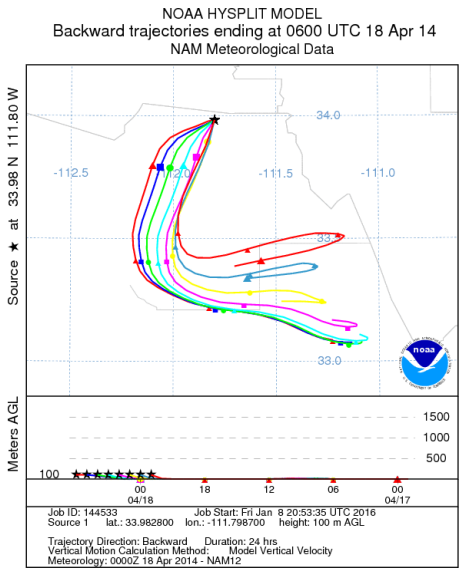
AI11 Humboldt Mountain Monitor – Maricopa County (04-013-9508)

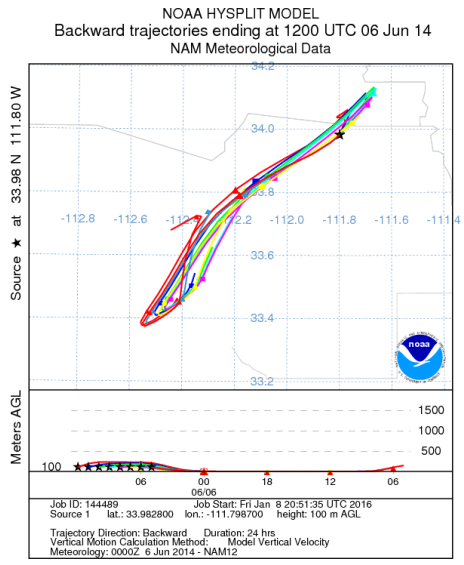


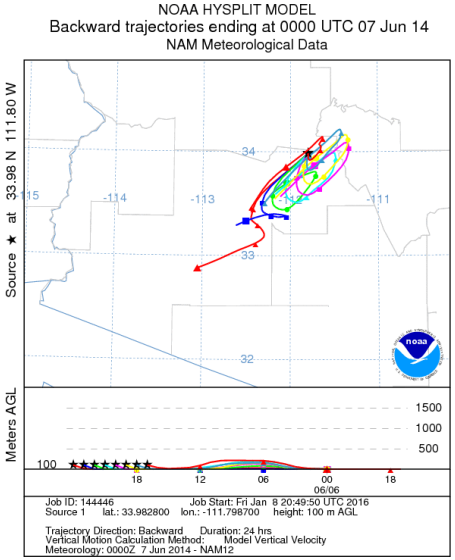


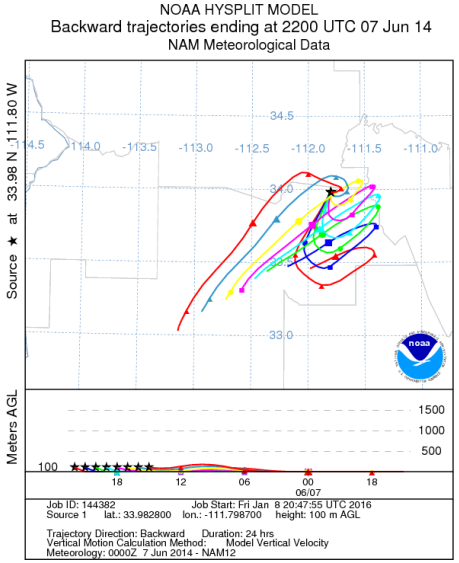


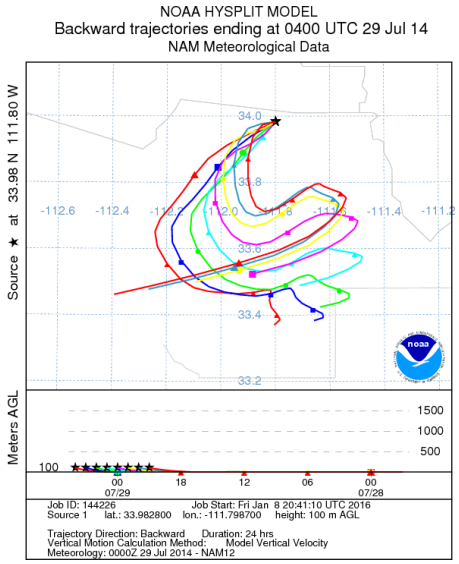


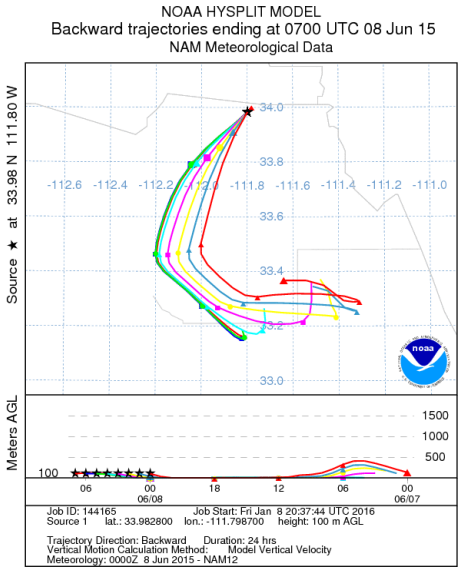




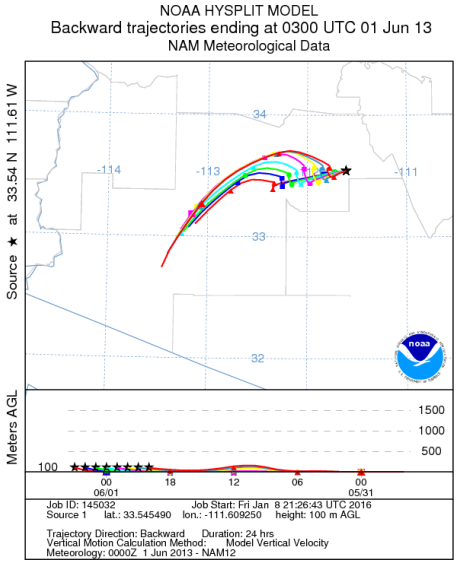

NOAA HYSPLIT MODEL
Backward trajectories ending at 0000 UTC 07 Jun 14
NAM Meteorological Data
Source ★ at 33.98 N 111.80 W
Meters AGL
Job ID: 144446 Job Start: Fri Jan 8 20:49:50 UTC 2016
Source 1 lat.: 33.982800 lon.: -111.798700 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 7 Jun 2014 - NAM12

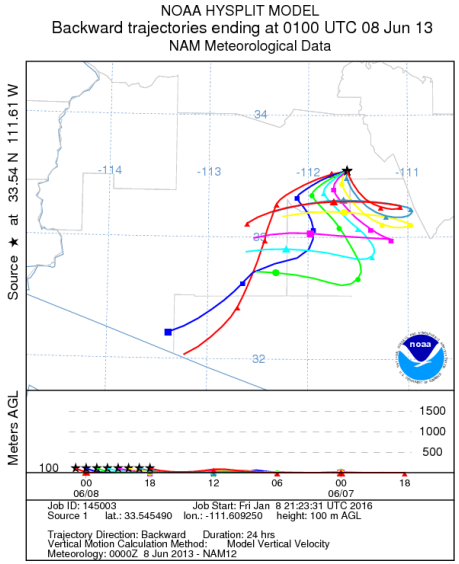

NOAA HYSPLIT MODEL
Backward trajectories ending at 2200 UTC 07 Jun 14
NAM Meteorological Data
Source ★ at 33.98 N 111.80 W
Meters AGL
Job ID: 144382 Job Start: Fri Jan 8 20:47:55 UTC 2016
Source 1 lat.: 33.982800 lon.: -111.798700 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 7 Jun 2014 - NAM12

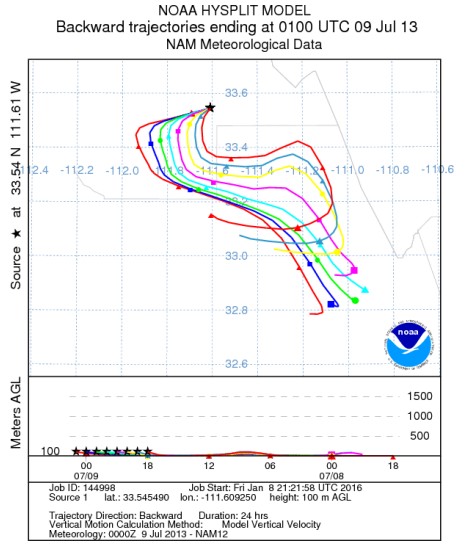

NOAA HYSPLIT MODEL
Backward trajectories ending at 0400 UTC 29 Jul 14
NAM Meteorological Data
Source ★ at 33.98 N 111.80 W
Meters AGL
Job ID: 144226 Job Start: Fri Jan 8 20:41:10 UTC 2016
Source 1 lat.: 33.982800 lon.: -111.798700 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 29 Jul 2014 - NAM12

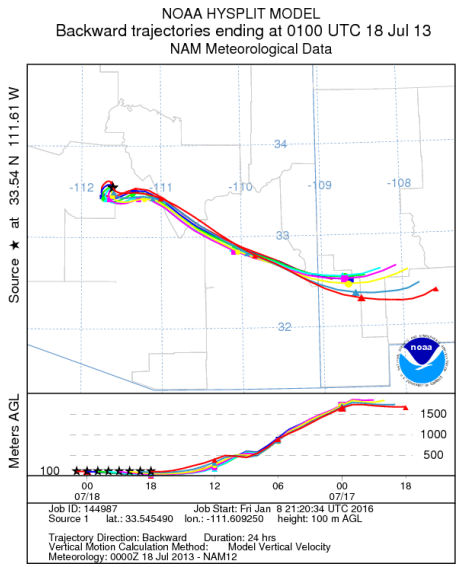

NOAA HYSPLIT MODEL
Backward trajectories ending at 0700 UTC 08 Jun 15
NAM Meteorological Data
Source ★ at 33.98 N 111.80 W
Meters AGL
Job ID: 144165 Job Start: Fri Jan 8 20:37:44 UTC 2016
Source 1 lat.: 33.982800 lon.: -111.798700 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 8 Jun 2015 - NAM12

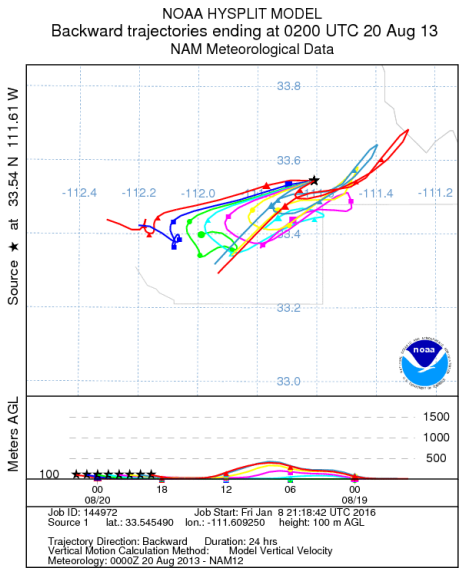
AI12 Blue Point Monitor – Maricopa County (04-013-9702)

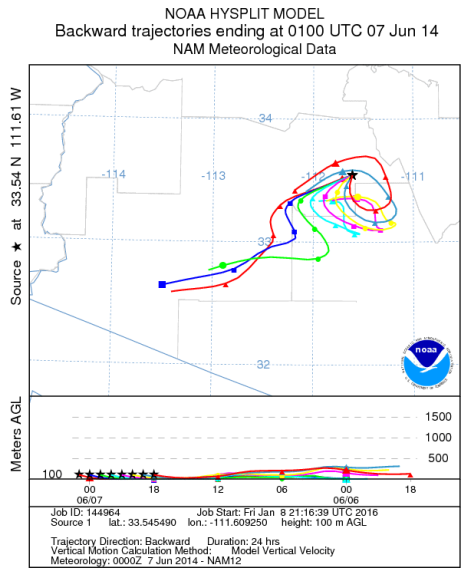


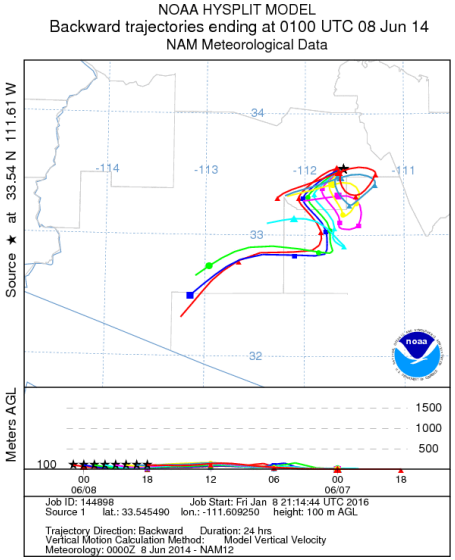


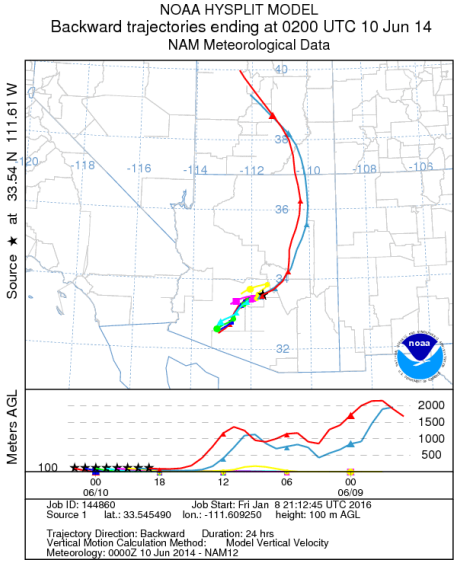


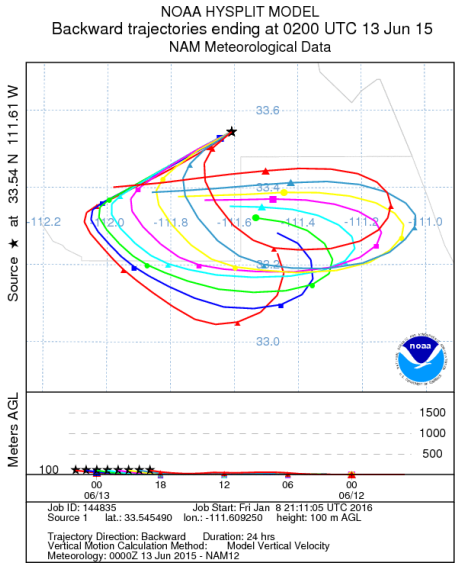


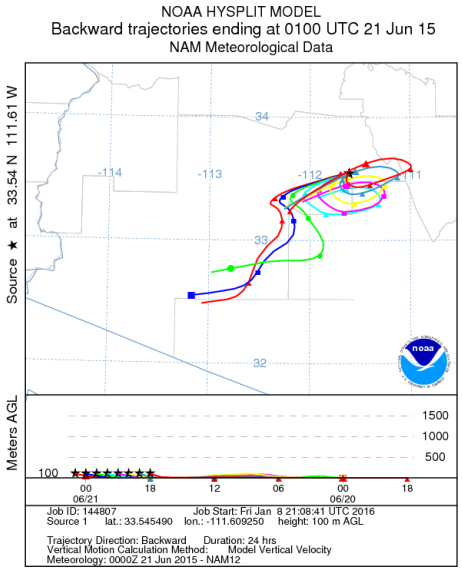




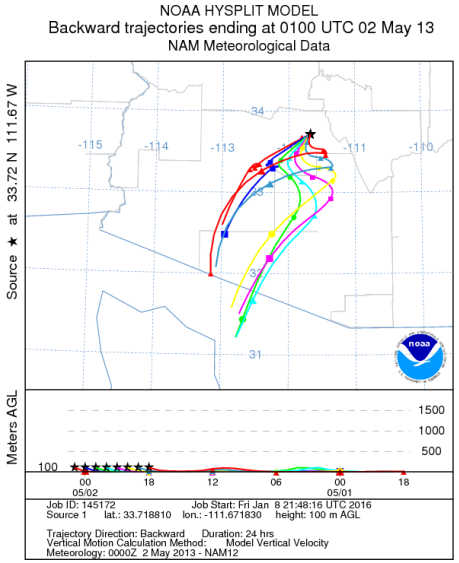

NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 08 Jun 14
NAM Meteorological Data
Source ★ at 33.54 N 111.61 W
Meters AGL
Job ID: 144898 Job Start: Fri Jan 8 21:14:44 UTC 2016
Source 1 lat.: 33.545490 lon.: -111.609250 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 8 Jun 2014 - NAM12

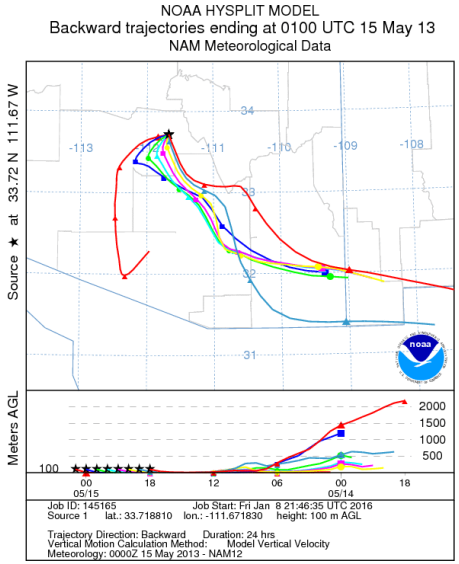

NOAA HYSPLIT MODEL
Backward trajectories ending at 0200 UTC 10 Jun 14
NAM Meteorological Data
Source ★ at 33.54 N 111.61 W
Meters AGL
Job ID: 144860 Job Start: Fri Jan 8 21:12:45 UTC 2016
Source 1 lat.: 33.545490 lon.: -111.609250 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 10 Jun 2014 - NAM12

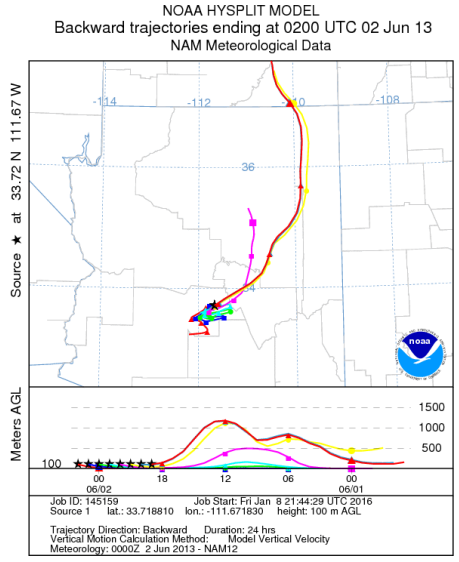

NOAA HYSPLIT MODEL
Backward trajectories ending at 0200 UTC 13 Jun 15
NAM Meteorological Data
Source ★ at 33.54 N 111.61 W
Meters AGL
Job ID: 144835 Job Start: Fri Jan 8 21:11:05 UTC 2016
Source 1 lat.: 33.545490 lon.: -111.609250 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 13 Jun 2015 - NAM12

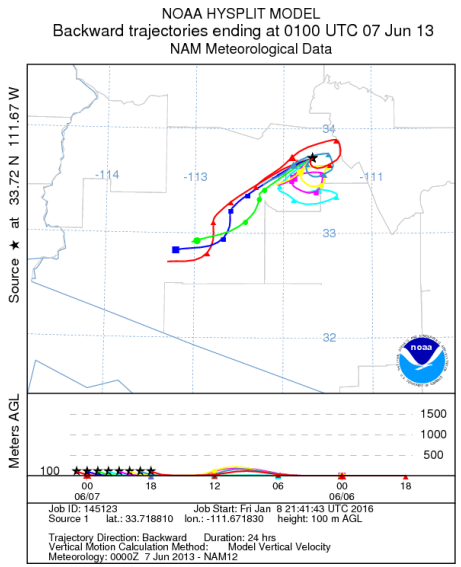

NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 21 Jun 15
NAM Meteorological Data
Source ★ at 33.54 N 111.61 W
Meters AGL
Job ID: 144807 Job Start: Fri Jan 8 21:08:41 UTC 2016
Source 1 lat.: 33.545490 lon.: -111.609250 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 21 Jun 2015 - NAM12

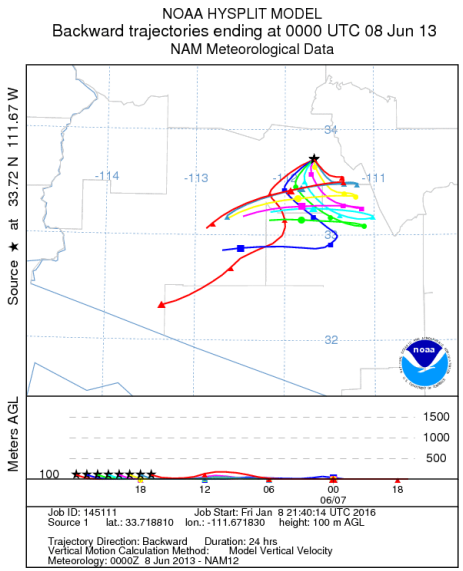
AI13 Rio Verde Monitor – Maricopa County (04-013-9706)

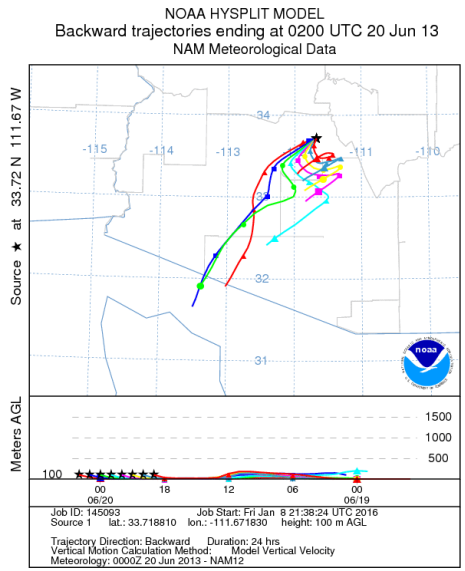


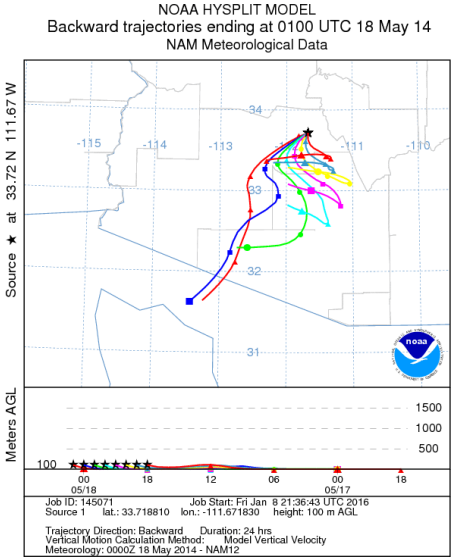


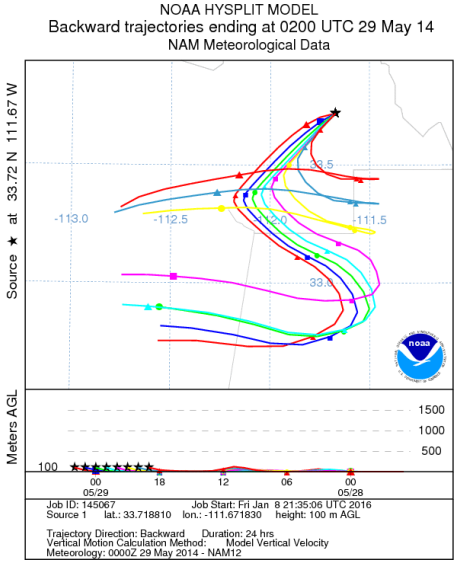


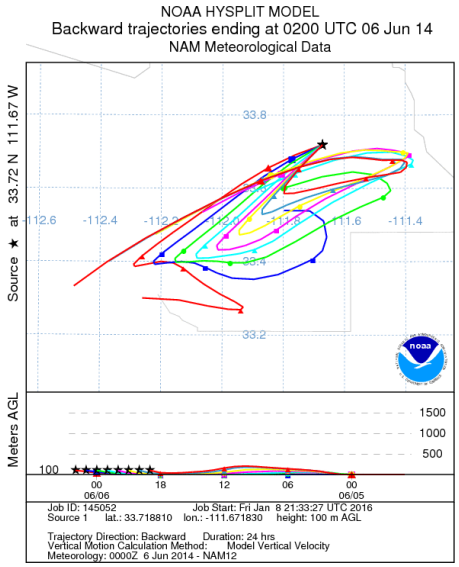


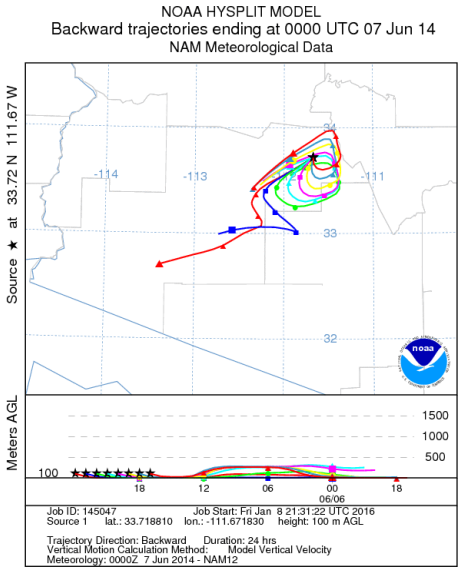




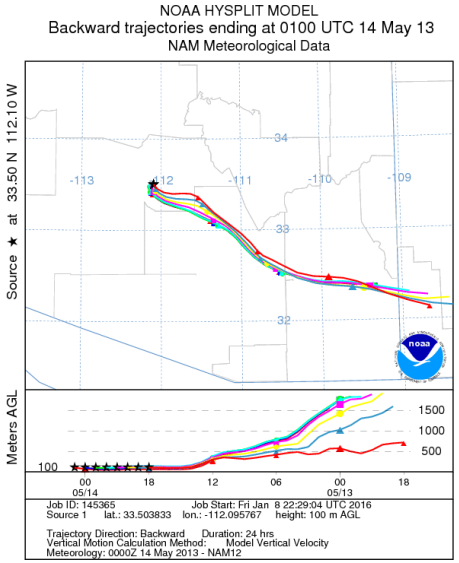

NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 18 May 14
NAM Meteorological Data
Source ★ at 33.72 N 111.67 W
Meters AGL
Job ID: 145071 Job Start: Fri Jan 8 21:36:43 UTC 2016
Source 1 lat.: 33.718810 lon.: -111.671830 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 18 May 2014 - NAM12

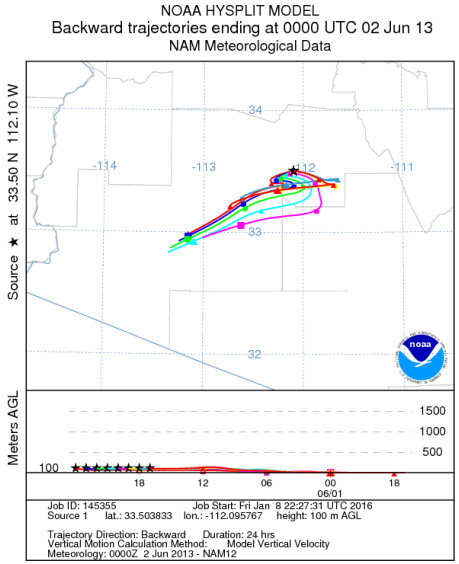

NOAA HYSPLIT MODEL
Backward trajectories ending at 0200 UTC 29 May 14
NAM Meteorological Data
Source ★ at 33.72 N 111.67 W
Meters AGL
Job ID: 145067 Job Start: Fri Jan 8 21:35:06 UTC 2016
Source 1 lat.: 33.718810 lon.: -111.671830 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 29 May 2014 - NAM12

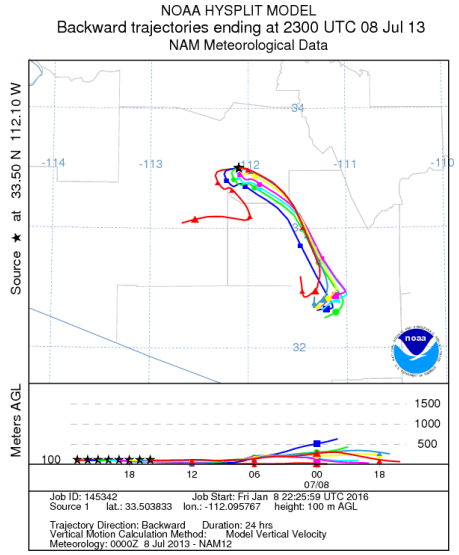

NOAA HYSPLIT MODEL
Backward trajectories ending at 0200 UTC 06 Jun 14
NAM Meteorological Data
Source ★ at 33.72 N 111.67 W
Meters AGL
Job ID: 145052 Job Start: Fri Jan 8 21:33:27 UTC 2016
Source 1 lat.: 33.718810 lon.: -111.671830 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 6 Jun 2014 - NAM12

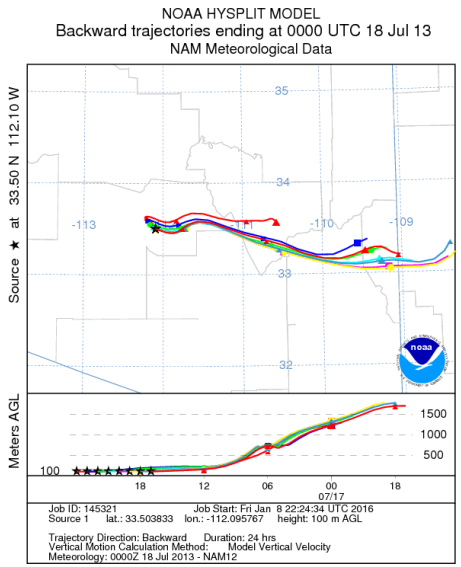

NOAA HYSPLIT MODEL
Backward trajectories ending at 0000 UTC 07 Jun 14
NAM Meteorological Data
Source ★ at 33.72 N 111.67 W
Meters AGL
Job ID: 145047 Job Start: Fri Jan 8 21:31:22 UTC 2016
Source 1 lat.: 33.718810 lon.: -111.671830 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 7 Jun 2014 - NAM12

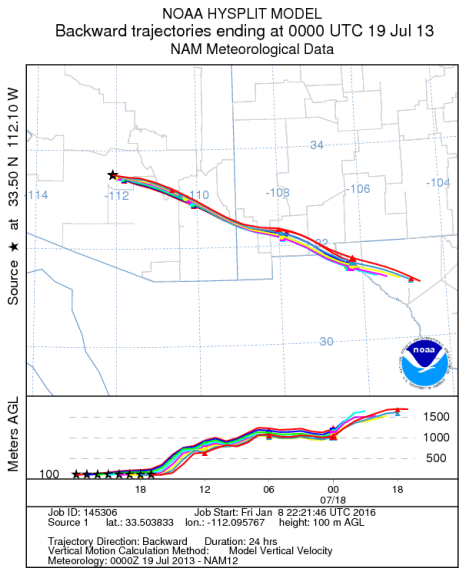
AI14 JLG Supersite Monitor – Maricopa County (04-013-9997)

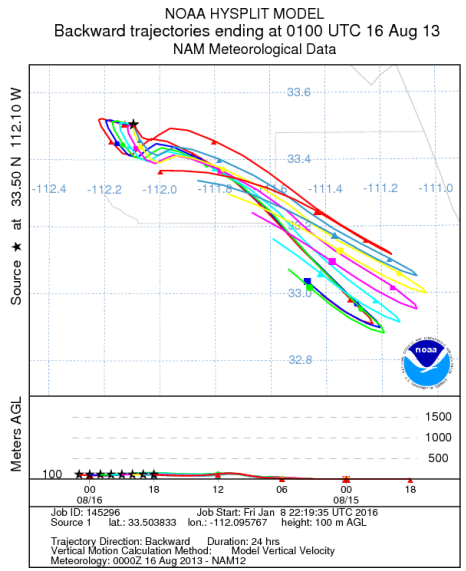


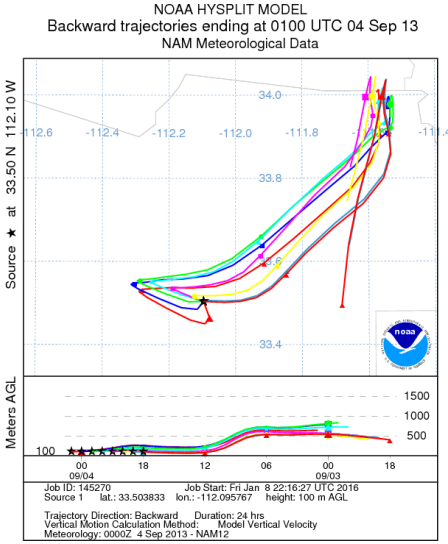


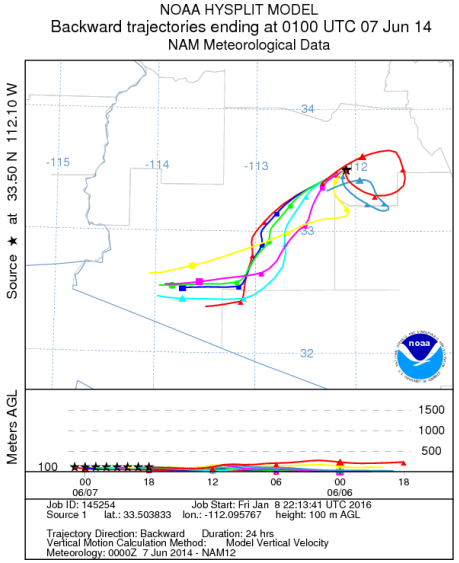


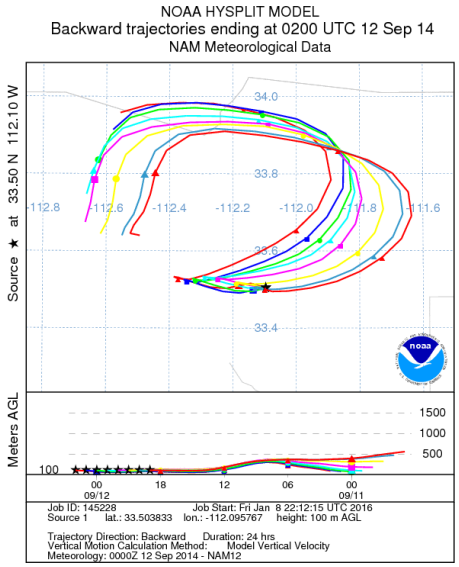


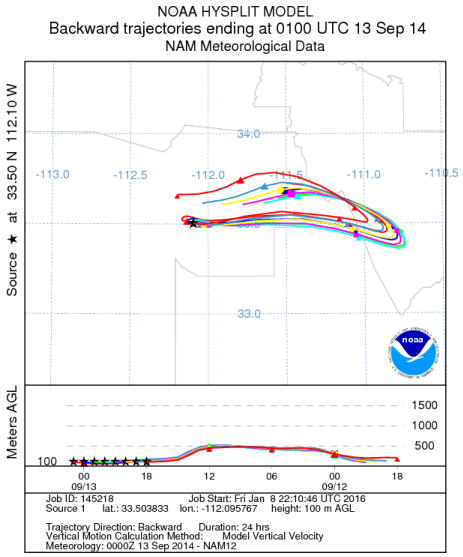




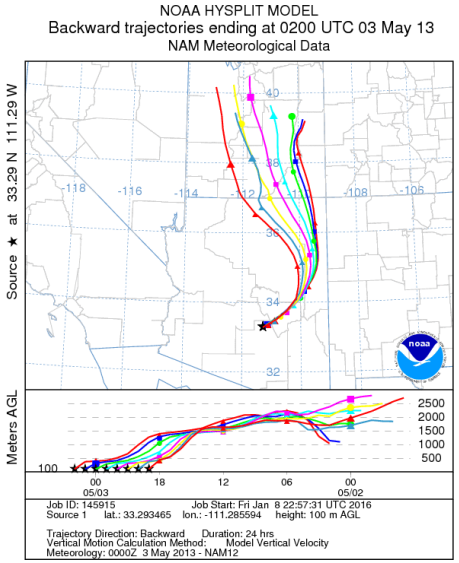

NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 04 Sep 13
NAM Meteorological Data
Source ★ at 33.50 N 112.10 W
Meters AGL
Job ID: 145270 Job Start: Fri Jan 8 22:16:27 UTC 2016
Source 1 lat.: 33.503833 lon.: -112.095767 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 4 Sep 2013 - NAM12

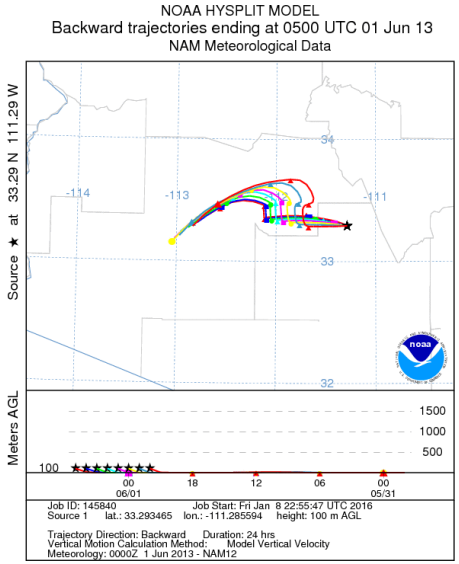

NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 07 Jun 14
NAM Meteorological Data
Source ★ at 33.50 N 112.10 W
Meters AGL
Job ID: 145254 Job Start: Fri Jan 8 22:13:41 UTC 2016
Source 1 lat.: 33.503833 lon.: -112.095767 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 7 Jun 2014 - NAM12

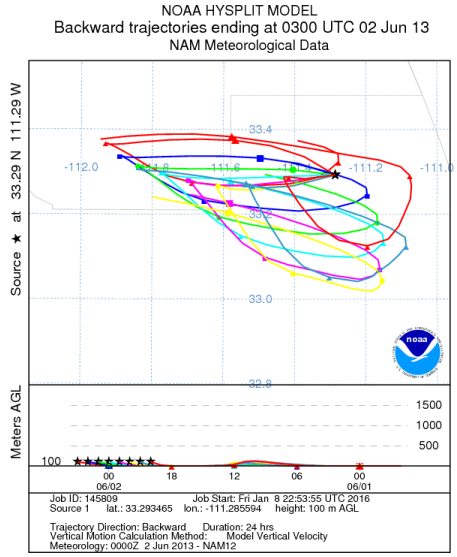

NOAA HYSPLIT MODEL
Backward trajectories ending at 0200 UTC 12 Sep 14
NAM Meteorological Data
Source ★ at 33.50 N 112.10 W
Meters AGL
Job ID: 145228 Job Start: Fri Jan 8 22:12:15 UTC 2016
Source 1 lat.: 33.503833 lon.: -112.095767 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 12 Sep 2014 - NAM12

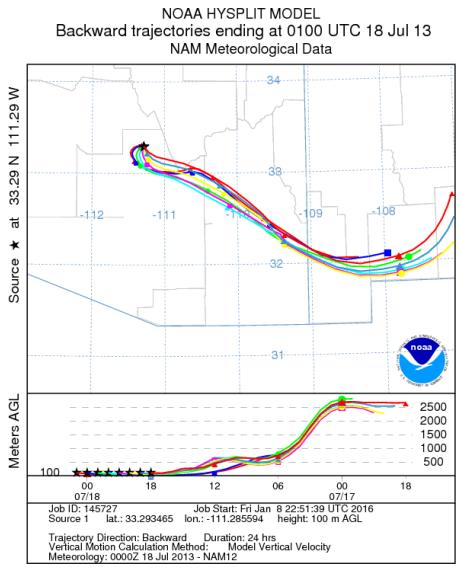

NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 13 Sep 14
NAM Meteorological Data
Source ★ at 33.50 N 112.10 W
Meters AGL
Job ID: 145218 Job Start: Fri Jan 8 22:10:46 UTC 2016
Source 1 lat.: 33.503833 lon.: -112.095767 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 13 Sep 2014 - NAM12

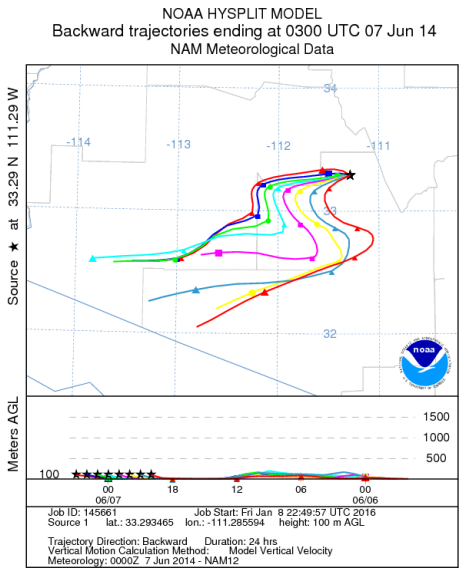
AI15 Queen Valley Monitor – Pinal County (04-021-8001)

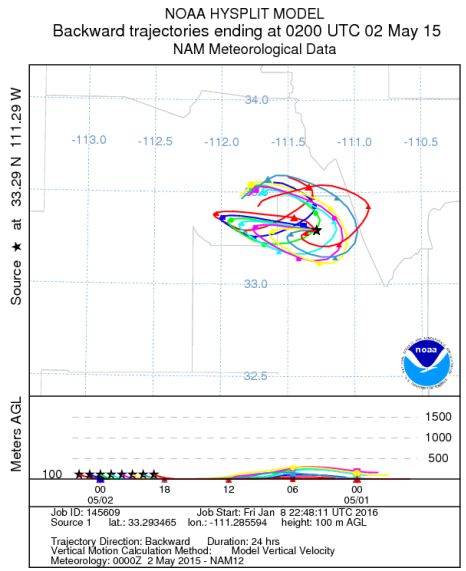


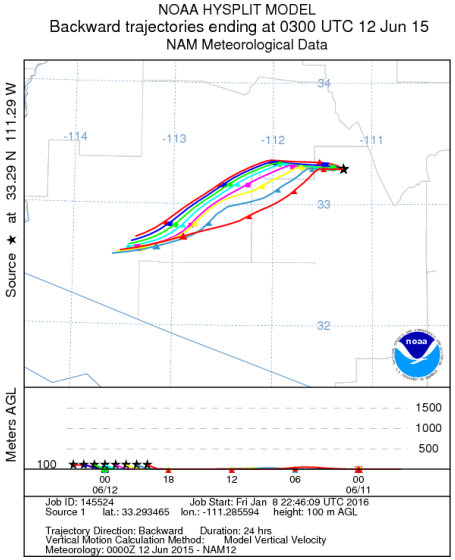


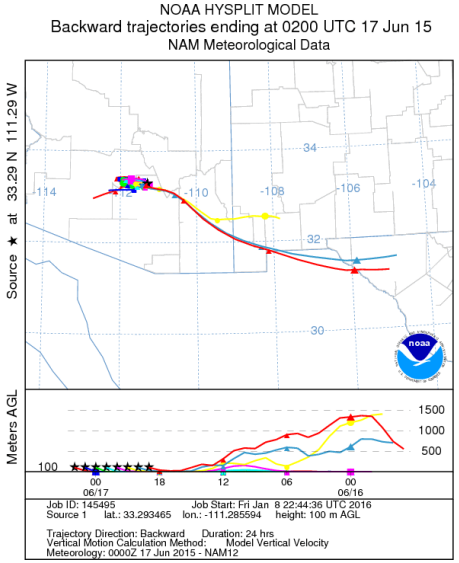


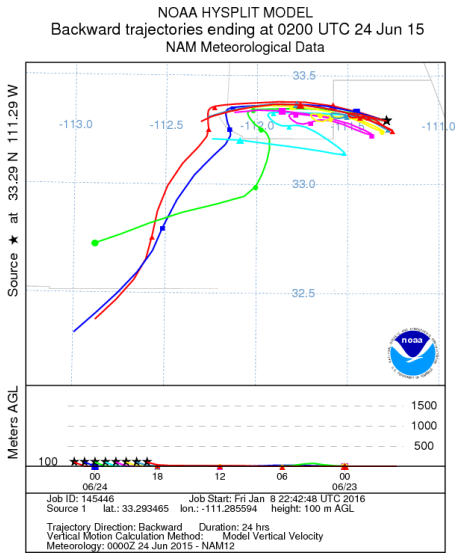


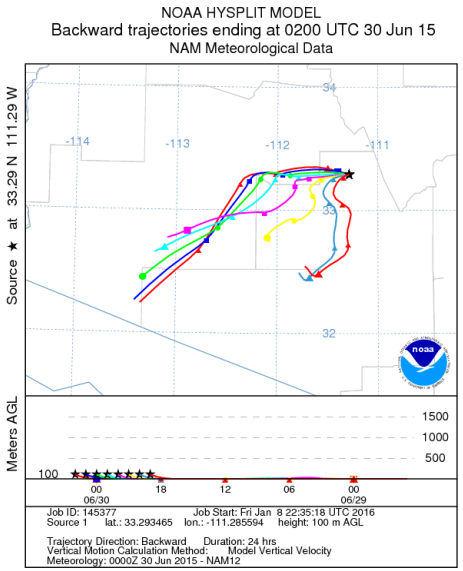




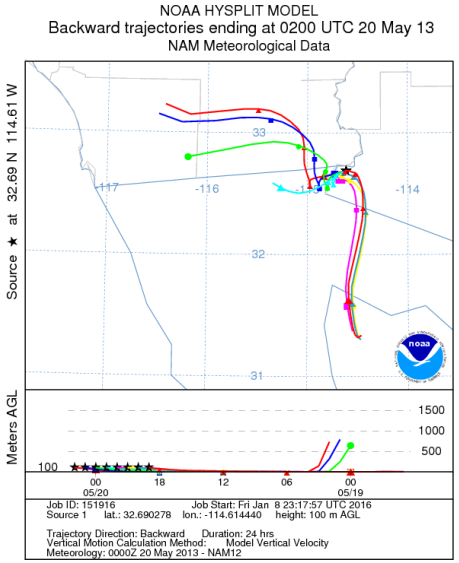

NOAA HYSPLIT MODEL
Backward trajectories ending at 0300 UTC 12 Jun 15
NAM Meteorological Data
Source ★ at 33.29 N 111.29 W
Meters AGL
Job ID: 145524 Job Start: Fri Jan 8 22:46:09 UTC 2016
Source 1 lat.: 33.293465 lon.: -111.285594 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 12 Jun 2015 - NAM12

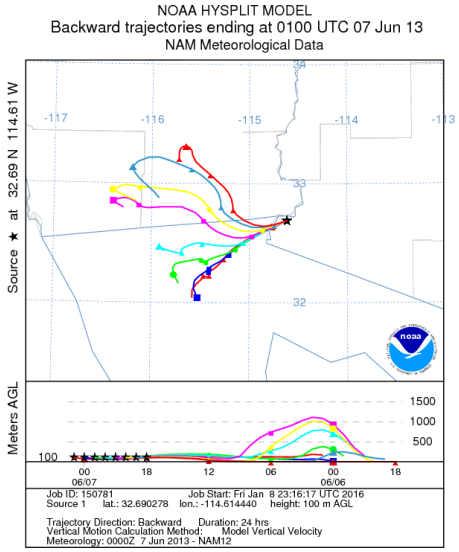

NOAA HYSPLIT MODEL
Backward trajectories ending at 0200 UTC 17 Jun 15
NAM Meteorological Data
Source ★ at 33.29 N 111.29 W
Meters AGL
Job ID: 145495 Job Start: Fri Jan 8 22:44:36 UTC 2016
Source 1 lat.: 33.293465 lon.: -111.285594 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 17 Jun 2015 - NAM12

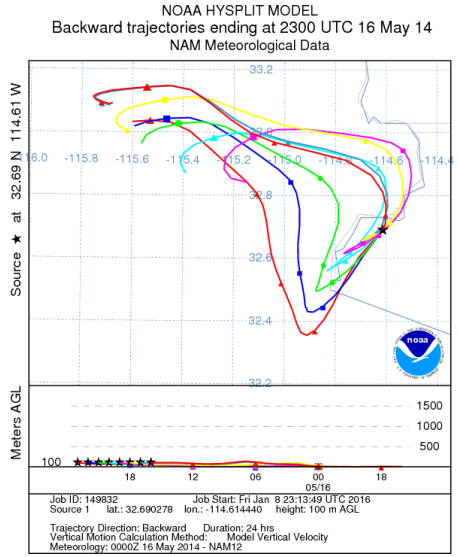

NOAA HYSPLIT MODEL
Backward trajectories ending at 0200 UTC 24 Jun 15
NAM Meteorological Data
Source ★ at 33.29 N 111.29 W
Meters AGL
Job ID: 145446 Job Start: Fri Jan 8 22:42:48 UTC 2016
Source 1 lat.: 33.293465 lon.: -111.285594 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 24 Jun 2015 - NAM12

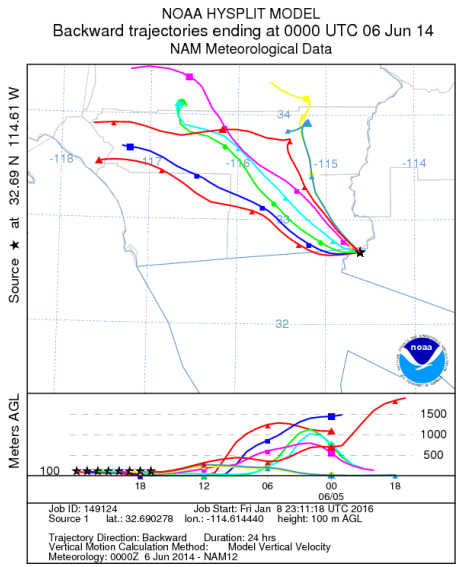

NOAA HYSPLIT MODEL
Backward trajectories ending at 0200 UTC 30 Jun 15
NAM Meteorological Data
Source ★ at 33.29 N 111.29 W
Meters AGL
Job ID: 145377 Job Start: Fri Jan 8 22:35:18 UTC 2016
Source 1 lat.: 33.293465 lon.: -111.285594 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 30 Jun 2015 - NAM12

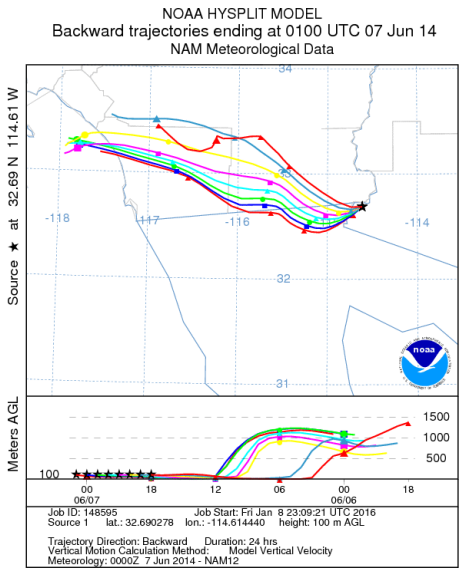
AI16 Yuma Supersite Monitor – Yuma County (04-027-8011)

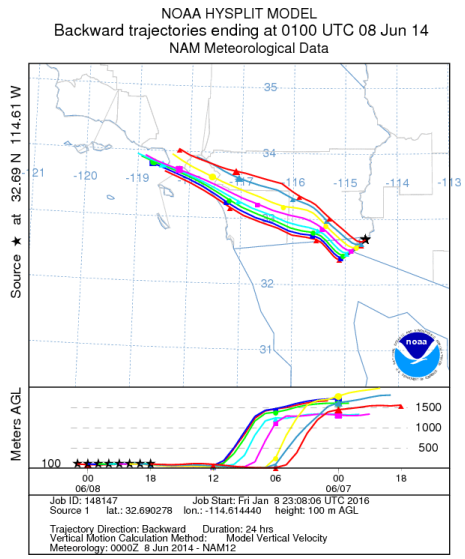


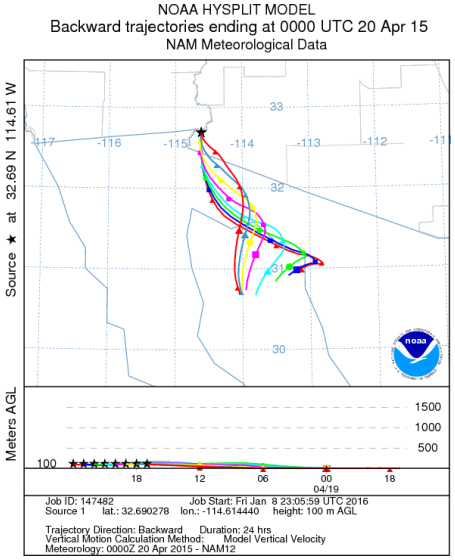


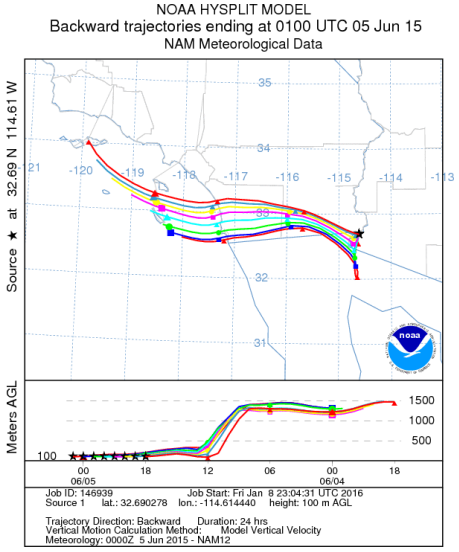


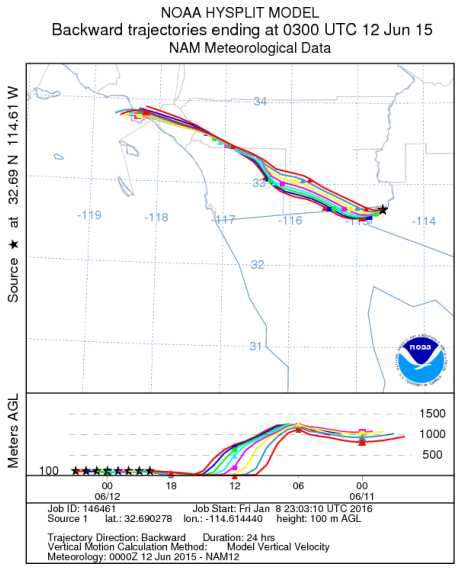


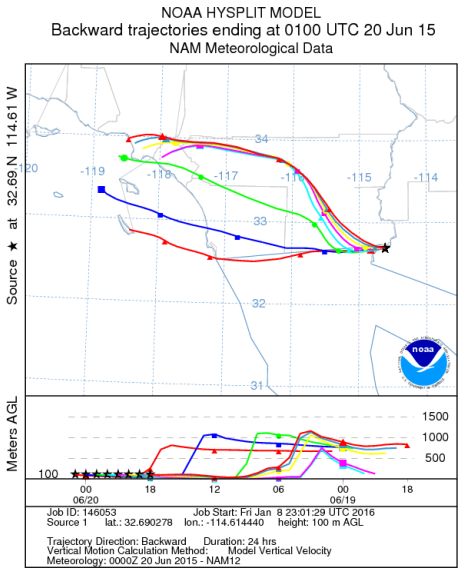





NOAA HYSPLIT MODEL
Backward trajectories ending at 0000 UTC 20 Apr 15
NAM Meteorological Data
Source ★ at 32.69 N 114.61 W
Meters AGL
Job ID: 147482 Job Start: Fri Jan 8 23:05:59 UTC 2016
Source 1 lat.: 32.690278 lon.: -114.614440 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 20 Apr 2015 - NAM12


NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 05 Jun 15
NAM Meteorological Data
Source ★ at 32.69 N 114.61 W
Meters AGL
Job ID: 146939 Job Start: Fri Jan 8 23:04:31 UTC 2016
Source 1 lat.: 32.690278 lon.: -114.614440 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 5 Jun 2015 - NAM12


NOAA HYSPLIT MODEL
Backward trajectories ending at 0300 UTC 12 Jun 15
NAM Meteorological Data
Source ★ at 32.69 N 114.61 W
Meters AGL
Job ID: 146461 Job Start: Fri Jan 8 23:03:10 UTC 2016
Source 1 lat.: 32.690278 lon.: -114.614440 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 12 Jun 2015 - NAM12


NOAA HYSPLIT MODEL
Backward trajectories ending at 0100 UTC 20 Jun 15
NAM Meteorological Data
Source ★ at 32.69 N 114.61 W
Meters AGL
Job ID: 146053 Job Start: Fri Jan 8 23:01:29 UTC 2016
Source 1 lat.: 32.690278 lon.: -114.614440 height: 100 m AGL
Trajectory Direction: Backward Duration: 24 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 20 Jun 2015 - NAM12