JOHN H. LYNCH
Governor

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October 27, 2011.

Mr. Curtis Spalding
Regional Administrator
U.S. Environmental Protection Agency, Region I
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: Designation of Nonattainment Areas Under the 8-Hour Ozone Standard (2008)

Dear Administrator Spalding:

I write today to update my recommendation regarding the 2008 revised 8-hour National Ambient Air Quality Standard ("NAAQS") for ground level ozone, based on new data that has become available. The data, including data from the 2011 ozone season, has been quality assured and submitted to EPA. In light of this updated information, I am withdrawing my previous recommendation that several locations in the state be designated as nonattainment areas for the 2008 8-hour ozone NAAQS and in its place recommend that the entire state of New Hampshire be designated as attainment.

New Hampshire acknowledges and understands the CAA § 107(d)(4) "presumptive norm" of designation boundaries based on census-based metropolitan areas. However, based on the approach outlined in 2008 EPA guidance memoranda[1], New Hampshire experts believe that it would be inappropriate to designate any portion of New Hampshire as part of a single multi-state attainment or nonattainment area that includes Barnstable, Bristol, Dukes, Nantucket, Norfolk, and Plymouth counties in southeastern Massachusetts, because these counties, as well as the state of Rhode Island, are in a fundamentally different airshed. Therefore, New Hampshire does not contribute to any violations of the NAAQS that were or may be measured in these areas. Technical information to support this statement is attached.

I have requested that my environmental staff coordinate with staff from our neighboring states and EPA Region I to ensure reasonable and consistent ozone designation classifications, analyses, and implementation plans across the region. This would meet EPA's need for consistency among the states while not putting New Hampshire in an ozone status that is not justified by scientific data or expediency.

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[1] See Memorandum from Robert J. Meyers, Principal Deputy Assistant Administrator, to Regional Administrators, Regions I-X *"Area Designations for the 2008 Revised Ozone National Ambient Air Quality Standards,"* December 4, 2008.

Thank you for your consideration of my recommendations. If you have any questions regarding this determination, please contact Thomas Burack, Commissioner of the Department of Environmental Services, at (603) 271-2958.

Sincerely,

John H. Lynch
Governor

Attachment

cc: Thomas Burack, DES
Robert Scott, DES
Jeffrey Underhill, DES
Arthur Marin, NESCAUM
Will Driscoll, OTC

New Hampshire's 8-Hour Ozone Monitoring Values and Airmass Trajectories

Updated New Hampshire ozone data and design values for the period of 2009 through 2011 are detailed in the table below. All 8-hour ozone design values in New Hampshire continue to measure well below the ozone National Ambient Air Quality Standard (NAAQS) of 75 parts per billion (ppb).

2009 – 2011 8-Hour Ozone Design Values by Monitor, parts-per-billion (ppb)

Location	Monitor ID	2009-11 Design Value	2009 4th Max	2010 4th Max	2011 4th Max
Camp Dodge	330074002	59	58	59	59
Concord	330131007	66	64	68	65
Keene	330050007	63	62	64	62
Laconia	330012004	62	62	64	60
Lebanon	330090010	60	59	61	59
Londonderry	330150018	--	--	--	69
Manchester	330110020	--	60	63	--
Miller State Park	330115001	70	72	**77**	62
Mt. Washington Summit	330074001	69	68	73	67
Nashua	330111011	66	66	67	65
Portsmouth	330150014	67	70	66	64
Rye - Odiorne	330150016	67	68	66	66

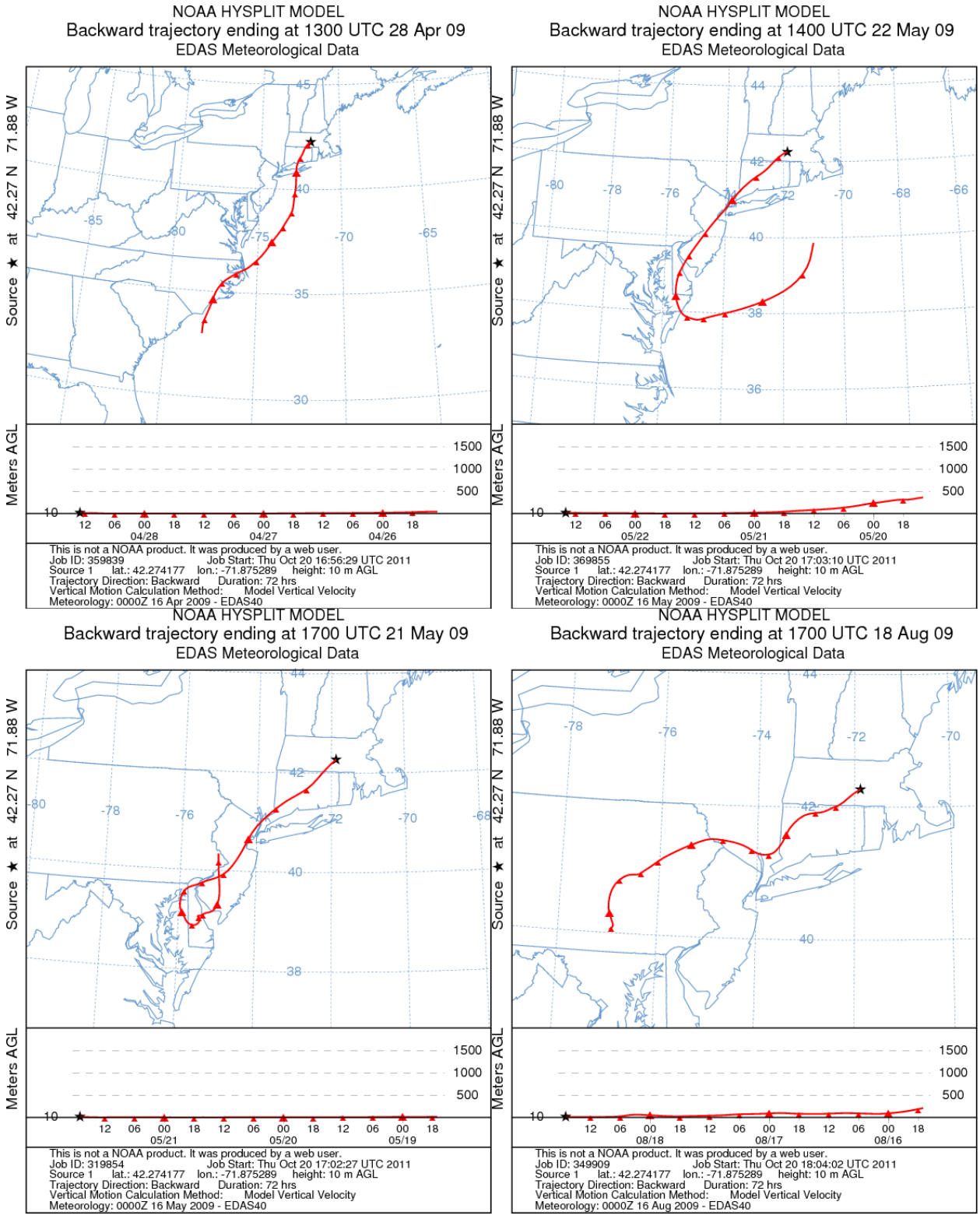
Areas of Influence to Regional Monitors with Design Values Greater than 75 ppb in Massachusetts and Rhode Island

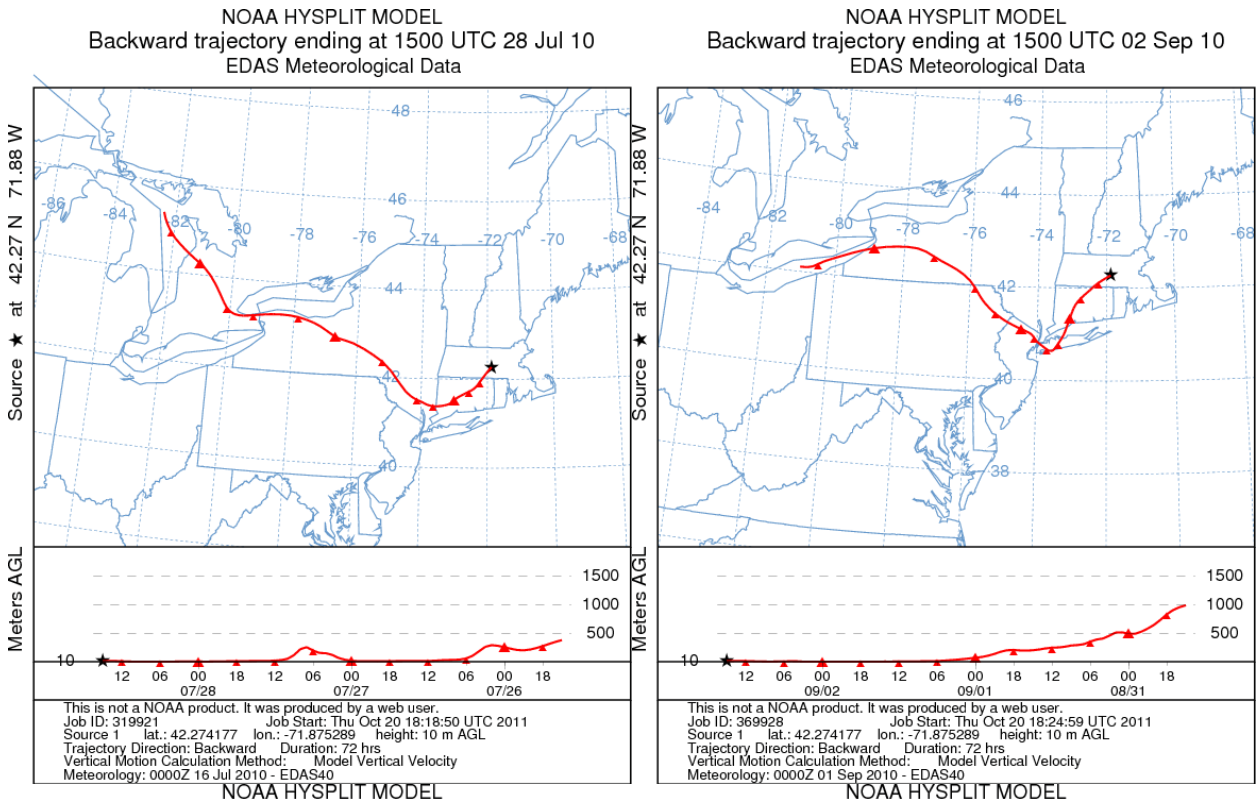
NHDES performed airflow back-trajectory analyses for all monitors that exceeded the ozone NAAQS during either of the most recent two design value periods (2008-2010 and 2009-2011). There are no monitors in New Hampshire, Maine, or Vermont with design values that fall into this category, but there are two in Massachusetts (Martha's Vineyard and Worcester) and one in Rhode Island (Narragansett) that qualify. For this analysis, back-trajectories were modeled for any day that one of the three identified monitors exceeded 75 ppb during 2009, 2010, or 2011.

NHDES used the National Oceanic and Atmospheric Administration (NOAA)'s Air Resources Laboratory HYSPLIT (HYbrid Single-Particle Lagrangian Integrated Trajectory) model. This is a computer model designed to create and map trajectories using gridded historical meteorological data. All trajectories produced by NHDES begin 72 hours before a measured value exceeds 75ppb.

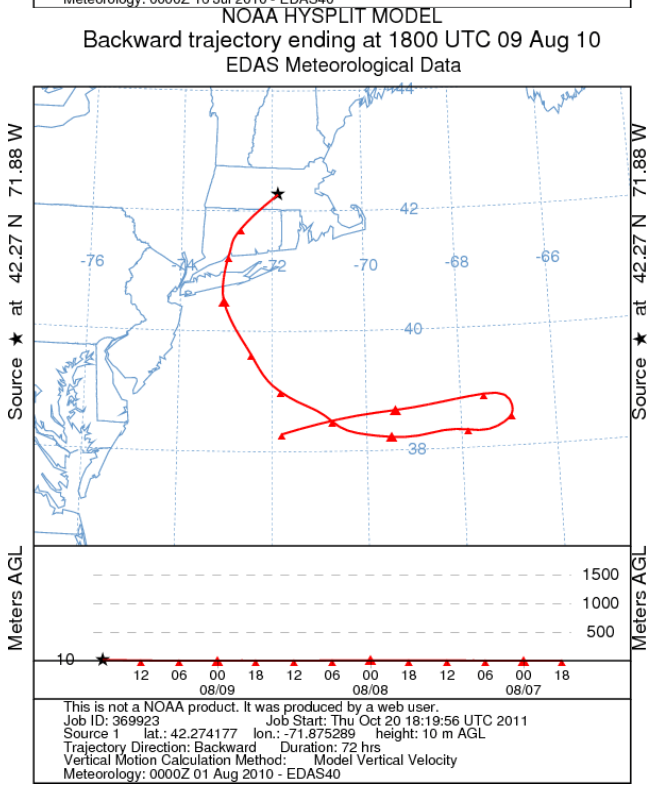
Each set of figures show that none of the airflow back trajectories pass over New Hampshire prior to arriving at Martha's Vineyard, Worcester, or Narragansett during high ozone days. Instead the trajectories show a strong influence from the southern portion of the Northeast Urban Corridor. Since none of these trajectories pass over New Hampshire and because New Hampshire's ozone levels are safely below the 75 ppb NAAQS, it can be concluded that New Hampshire does not contribute to any of these exceedances in southeastern Massachusetts and Rhode Island and further supports the concept that these areas are in a different airshed from New Hampshire.

Back Trajectories for Days Greater than 75 ppb at Worcester, MA




NOAA HYSPLIT MODEL
Backward trajectory ending at 1500 UTC 28 Jul 10
EDAS Meteorological Data
Source ★ at 42.27 N 71.88 W
Meters AGL
1500
1000
500
10
12 06 00 18 12 06 00 18 12 06 00 18
07/28 07/27 07/26
This is not a NOAA product. It was produced by a web user.
Job ID: 319921 Job Start: Thu Oct 20 18:18:50 UTC 2011
Source 1 lat.: 42.274177 lon.: -71.875289 height: 10 m AGL
Trajectory Direction: Backward Duration: 72 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 16 Jul 2010 - EDAS40

NOAA HYSPLIT MODEL
Backward trajectory ending at 1500 UTC 02 Sep 10
EDAS Meteorological Data
Source ★ at 42.27 N 71.88 W
Meters AGL
1500
1000
500
10
12 06 00 18 12 06 00 18 12 06 00 18
09/02 09/01 08/31
This is not a NOAA product. It was produced by a web user.
Job ID: 369928 Job Start: Thu Oct 20 18:24:59 UTC 2011
Source 1 lat.: 42.274177 lon.: -71.875289 height: 10 m AGL
Trajectory Direction: Backward Duration: 72 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 01 Sep 2010 - EDAS40


NOAA HYSPLIT MODEL
Backward trajectory ending at 1800 UTC 09 Aug 10
EDAS Meteorological Data
Source ★ at 42.27 N 71.88 W
Meters AGL
1500
1000
500
10
12 06 00 18 12 06 00 18 12 06 00 18
08/09 08/08 08/07
This is not a NOAA product. It was produced by a web user.
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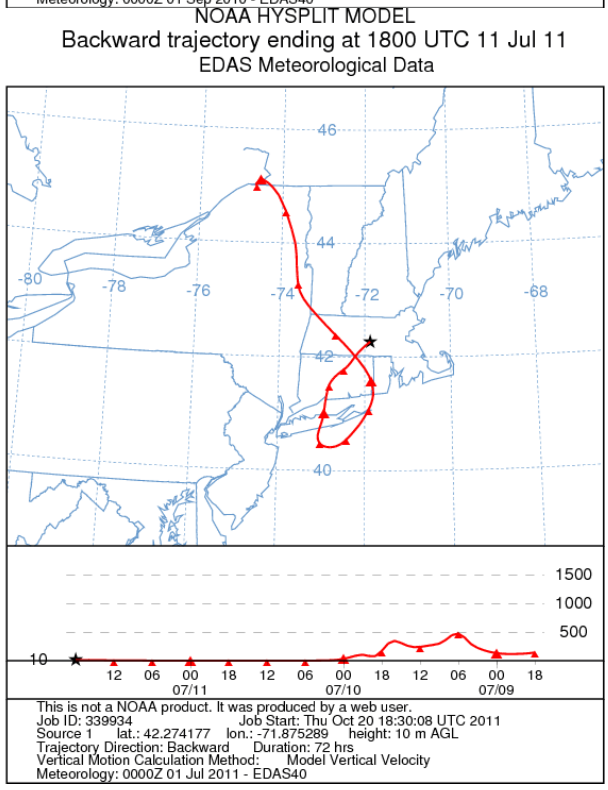
Trajectory Direction: Backward Duration: 72 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 01 Aug 2010 - EDAS40


NOAA HYSPLIT MODEL
Backward trajectory ending at 1800 UTC 11 Jul 11
EDAS Meteorological Data
Source ★ at 42.27 N 71.88 W
Meters AGL
1500
1000
500
10
12 06 00 18 12 06 00 18 12 06 00 18
07/11 07/10 07/09
This is not a NOAA product. It was produced by a web user.
Job ID: 339934 Job Start: Thu Oct 20 18:30:08 UTC 2011
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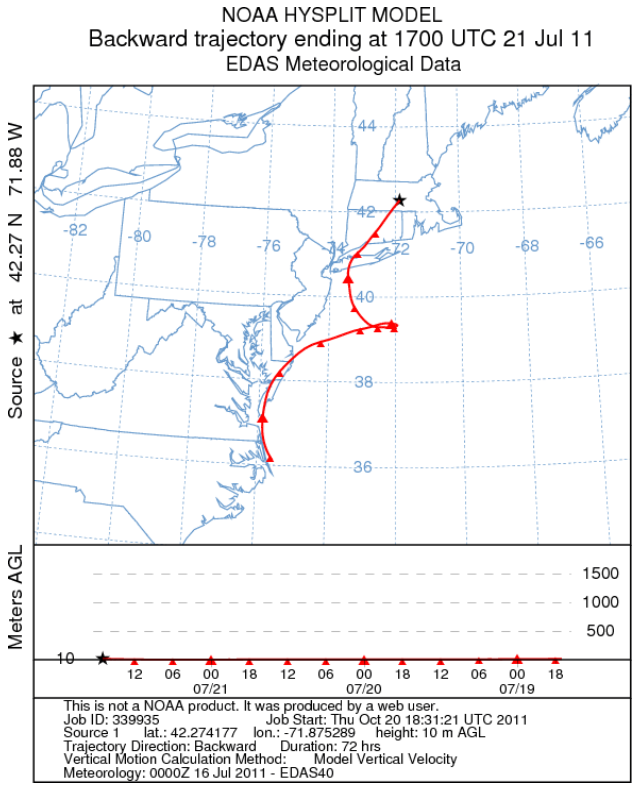
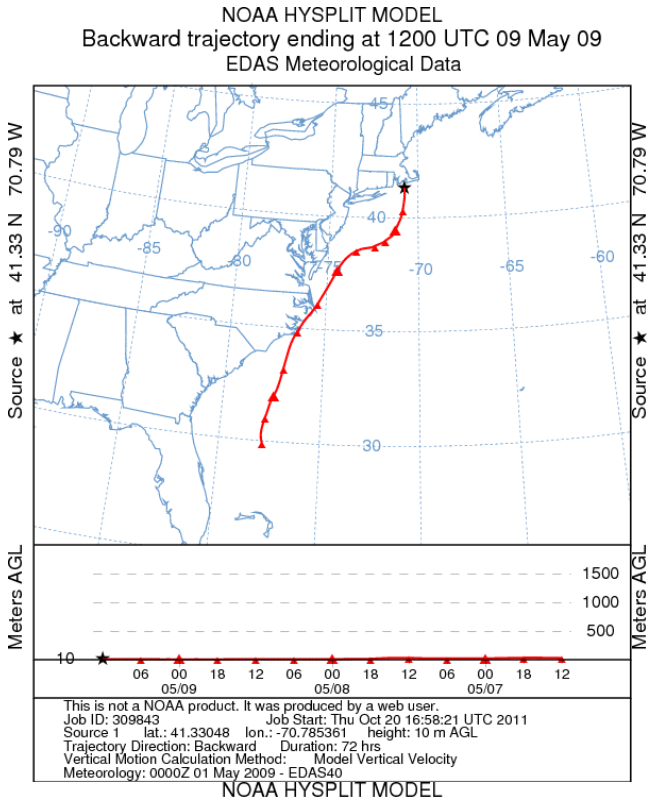
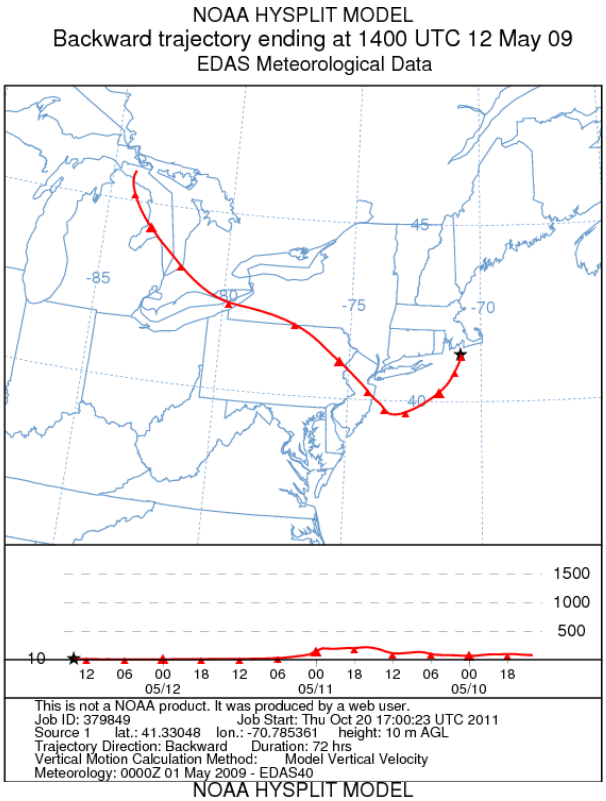
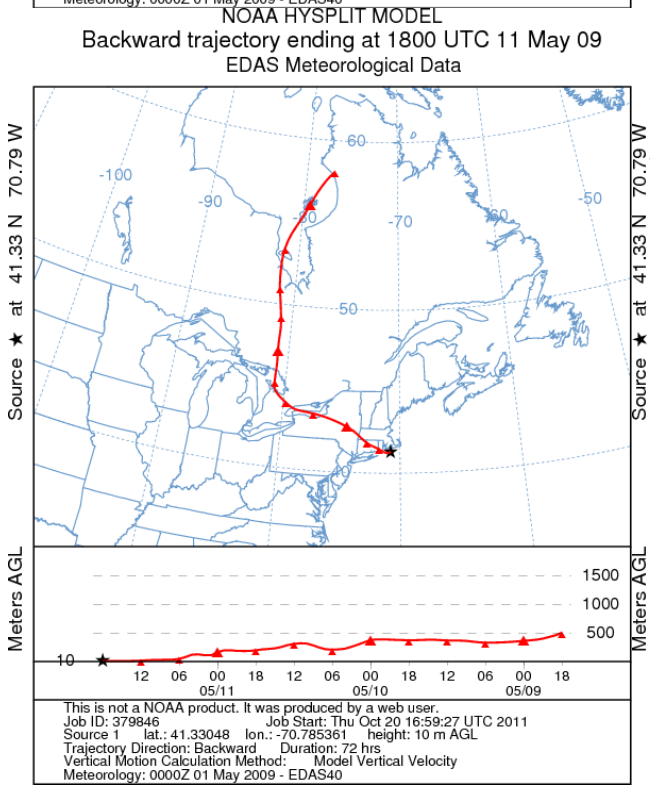
Trajectory Direction: Backward Duration: 72 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 01 Jul 2011 - EDAS40

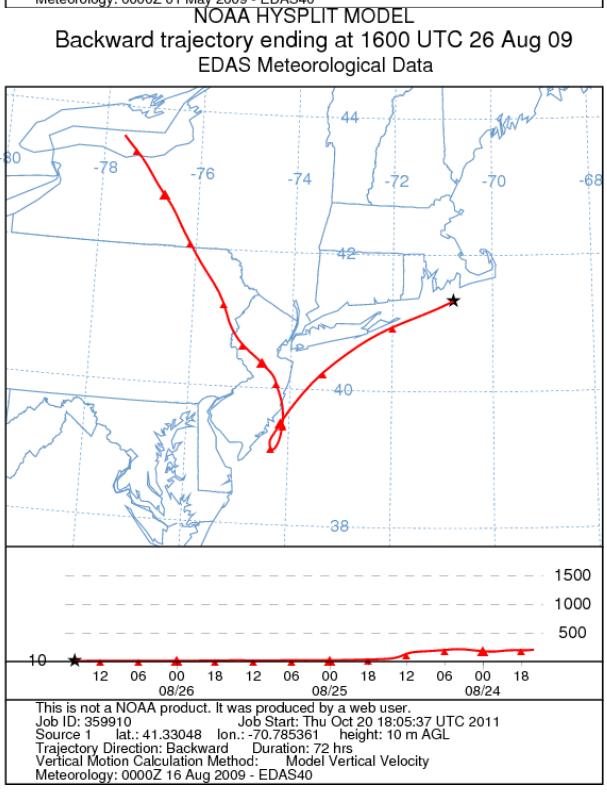

NOAA HYSPLIT MODEL
Backward trajectory ending at 1700 UTC 21 Jul 11
EDAS Meteorological Data
Source ★ at 42.27 N 71.88 W
44
42
40
38
36
-82
-80
-78
-76
-74
-72
-70
-68
-66
Meters AGL
1500
1000
500
10
12 06 00 18 12 06 00 18 12 06 00 18
07/21 07/20 07/19
This is not a NOAA product. It was produced by a web user.
Job ID: 339935 Job Start: Thu Oct 20 18:31:21 UTC 2011
Source 1 lat.: 42.274177 lon.: -71.875289 height: 10 m AGL
Trajectory Direction: Backward Duration: 72 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 16 Jul 2011 - EDAS40

Back Trajectories for Days Greater than 75 ppb at Martha's Vineyard, MA

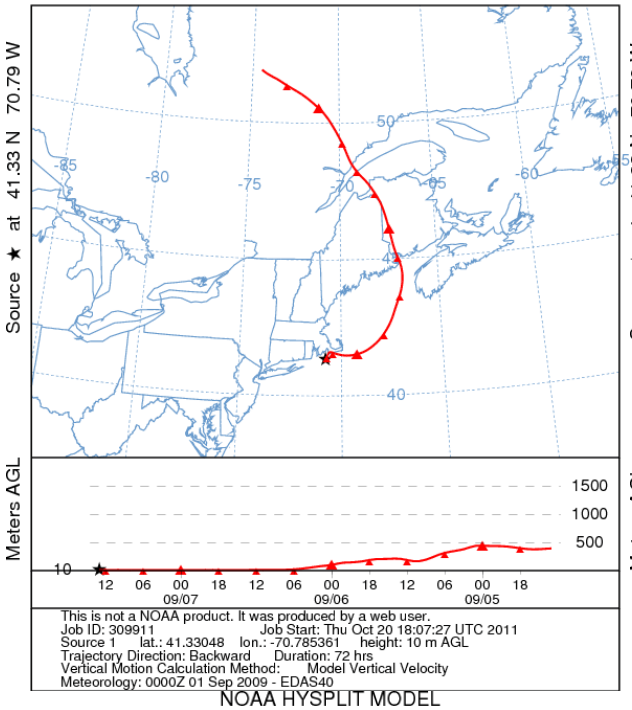








NOAA HYSPLIT MODEL
Backward trajectory ending at 1300 UTC 07 Sep 09
EDAS Meteorological Data



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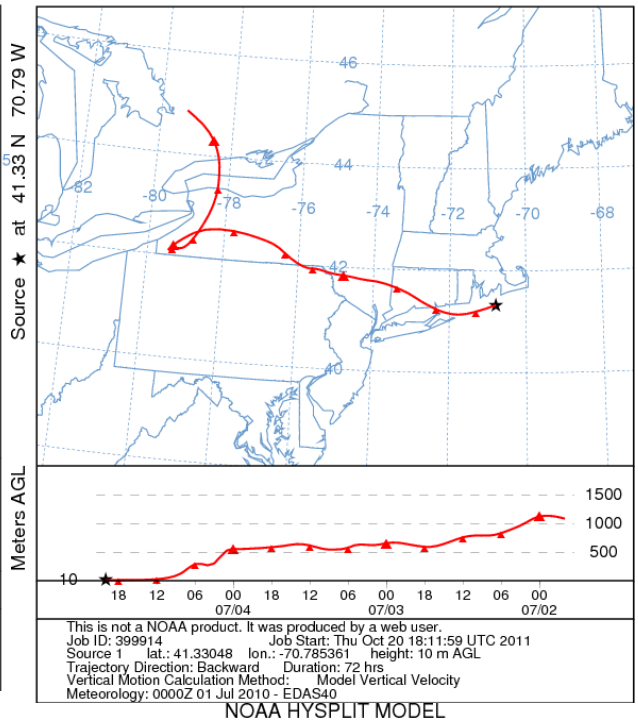
Job ID: 309911 Job Start: Thu Oct 20 18:07:27 UTC 2011
Source 1 lat.: 41.33048 lon.: -70.785361 height: 10 m AGL
Trajectory Direction: Backward Duration: 72 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 01 Sep 2009 - EDAS40

NOAA HYSPLIT MODEL
Backward trajectory ending at 2000 UTC 04 Jul 10
EDAS Meteorological Data



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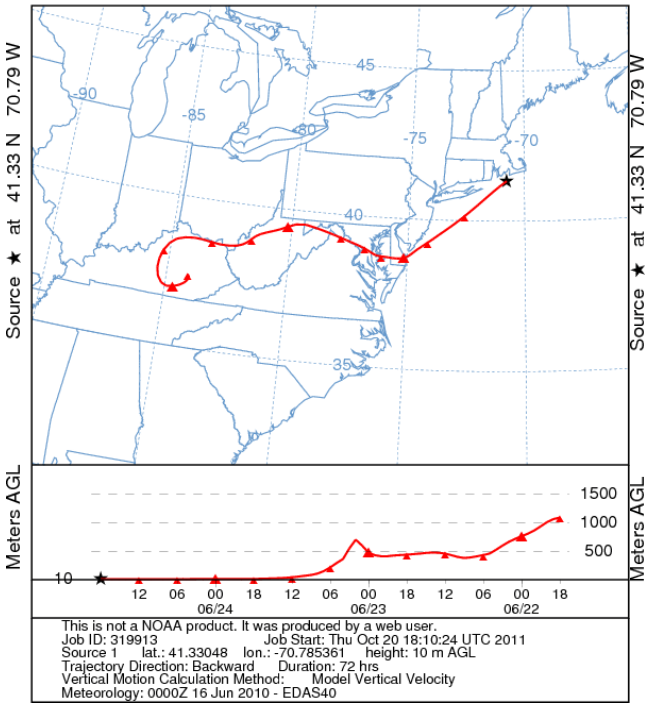
Job ID: 399914 Job Start: Thu Oct 20 18:11:59 UTC 2011
Source 1 lat.: 41.33048 lon.: -70.785361 height: 10 m AGL
Trajectory Direction: Backward Duration: 72 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 01 Jul 2010 - EDAS40

NOAA HYSPLIT MODEL
Backward trajectory ending at 1800 UTC 24 Jun 10
EDAS Meteorological Data



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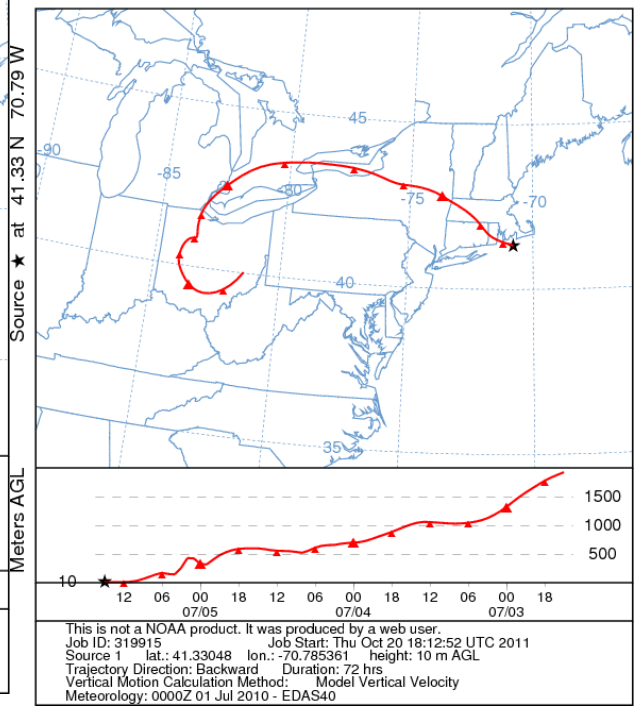
Job ID: 319913 Job Start: Thu Oct 20 18:10:24 UTC 2011
Source 1 lat.: 41.33048 lon.: -70.785361 height: 10 m AGL
Trajectory Direction: Backward Duration: 72 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 16 Jun 2010 - EDAS40

NOAA HYSPLIT MODEL
Backward trajectory ending at 1500 UTC 05 Jul 10
EDAS Meteorological Data



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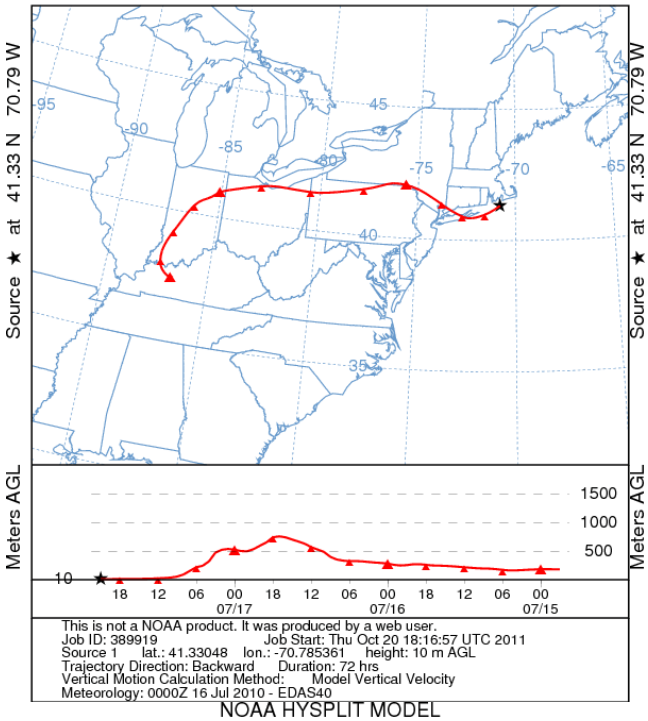
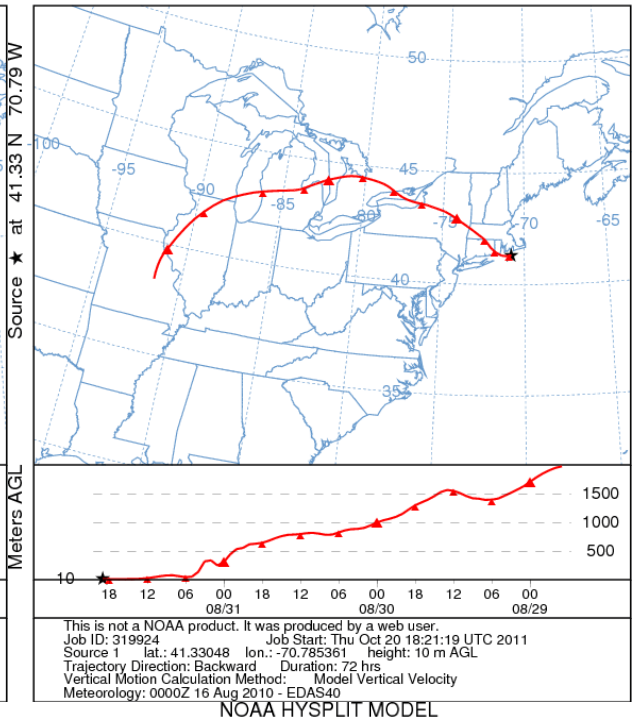
Job ID: 319915 Job Start: Thu Oct 20 18:12:52 UTC 2011
Source 1 lat.: 41.33048 lon.: -70.785361 height: 10 m AGL
Trajectory Direction: Backward Duration: 72 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 01 Jul 2010 - EDAS40

NOAA HYSPLIT MODEL
Backward trajectory ending at 2100 UTC 17 Jul 10
EDAS Meteorological Data



This is not a NOAA product. It was produced by a web user.
Job ID: 389919 Job Start: Thu Oct 20 18:16:57 UTC 2011
Source 1 lat.: 41.33048 lon.: -70.785361 height: 10 m AGL
Trajectory Direction: Backward Duration: 72 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 16 Jul 2010 - EDAS40

NOAA HYSPLIT MODEL
Backward trajectory ending at 1900 UTC 31 Aug 10
EDAS Meteorological Data



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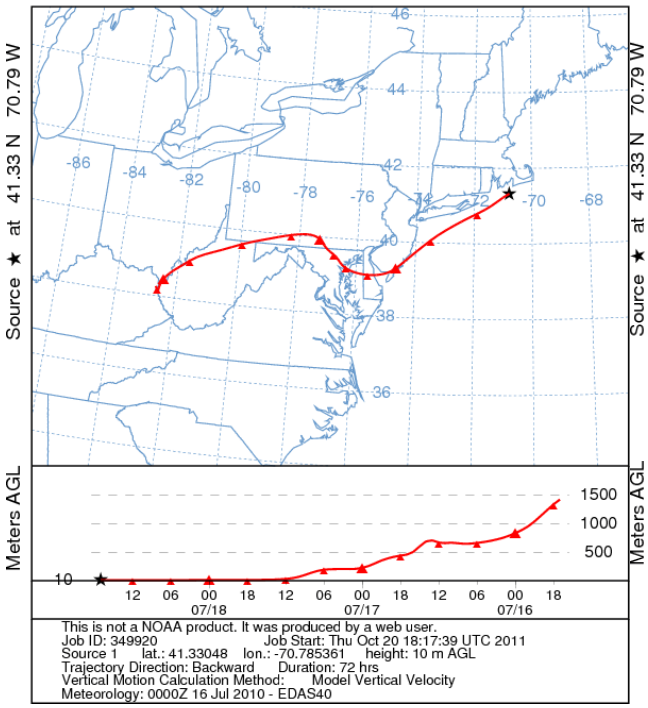
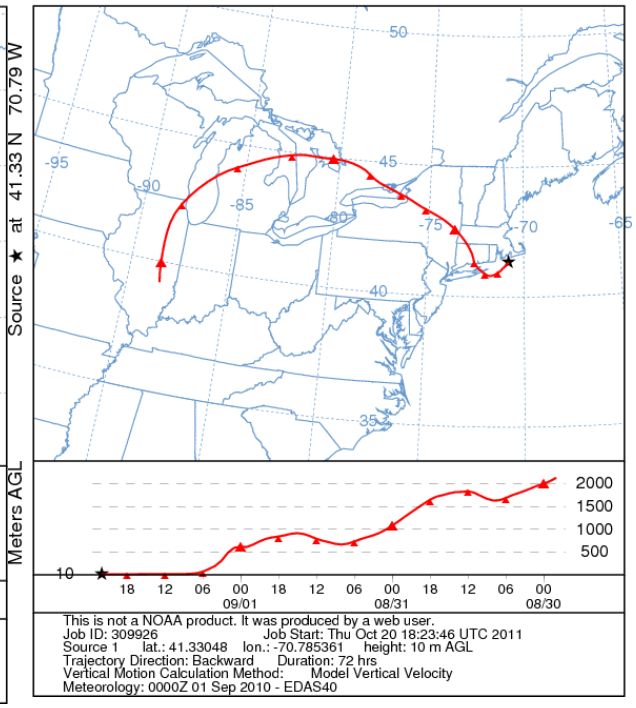
Job ID: 319924 Job Start: Thu Oct 20 18:21:19 UTC 2011
Source 1 lat.: 41.33048 lon.: -70.785361 height: 10 m AGL
Trajectory Direction: Backward Duration: 72 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 16 Aug 2010 - EDAS40

NOAA HYSPLIT MODEL
Backward trajectory ending at 1700 UTC 18 Jul 10
EDAS Meteorological Data



This is not a NOAA product. It was produced by a web user.
Job ID: 349920 Job Start: Thu Oct 20 18:17:39 UTC 2011
Source 1 lat.: 41.33048 lon.: -70.785361 height: 10 m AGL
Trajectory Direction: Backward Duration: 72 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 16 Jul 2010 - EDAS40

NOAA HYSPLIT MODEL
Backward trajectory ending at 2200 UTC 01 Sep 10
EDAS Meteorological Data



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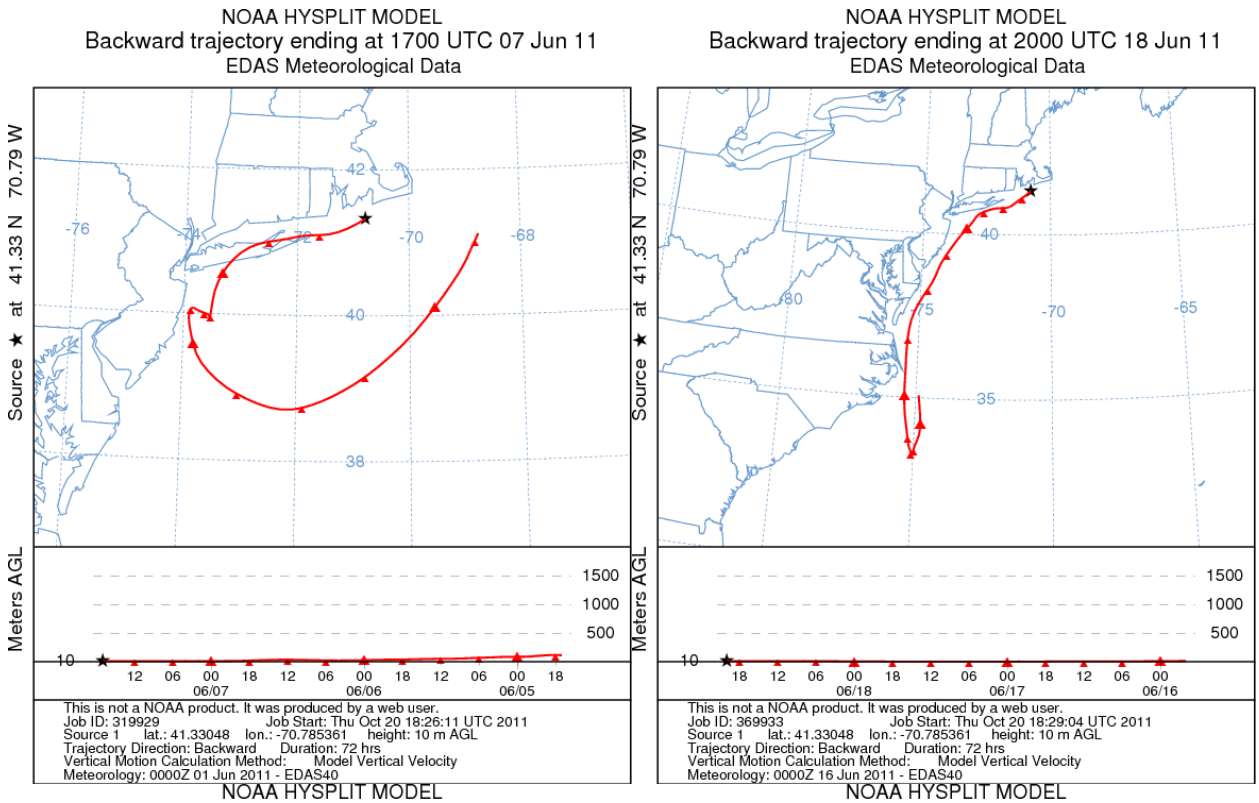
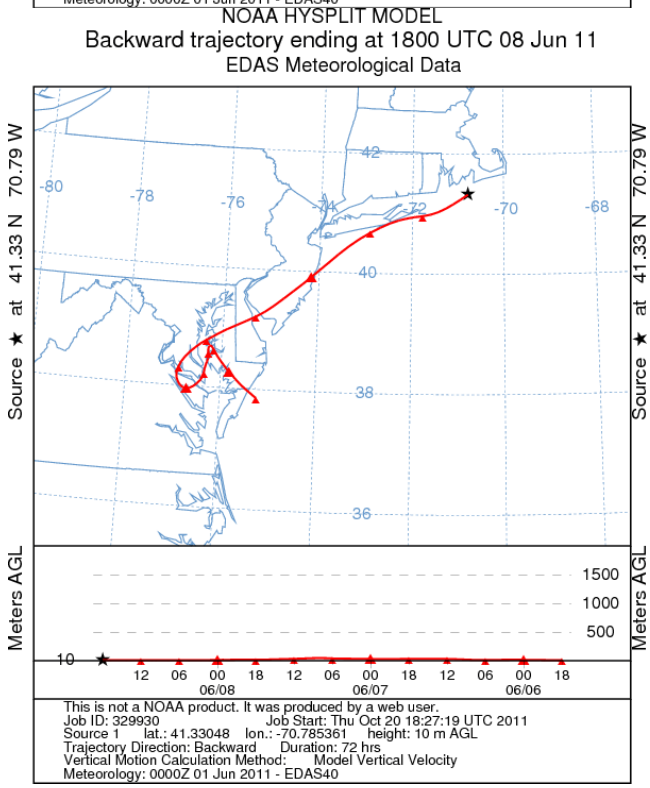
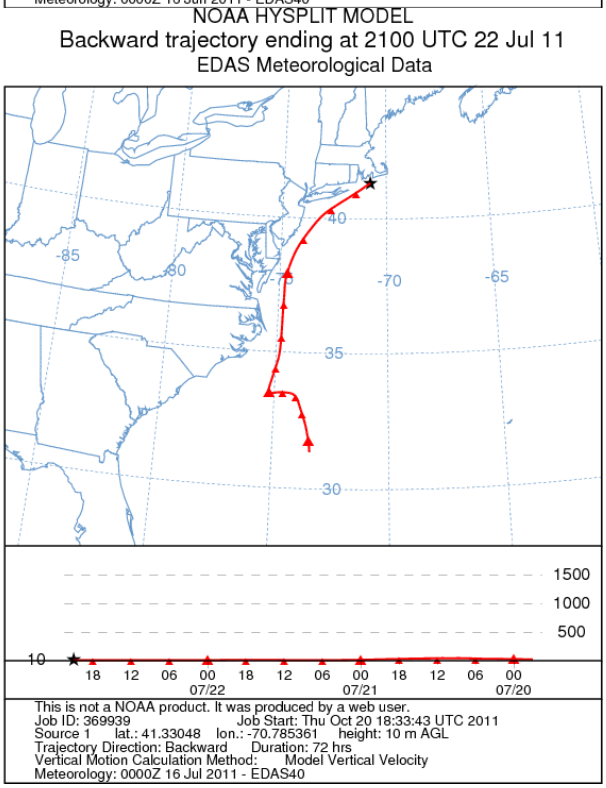
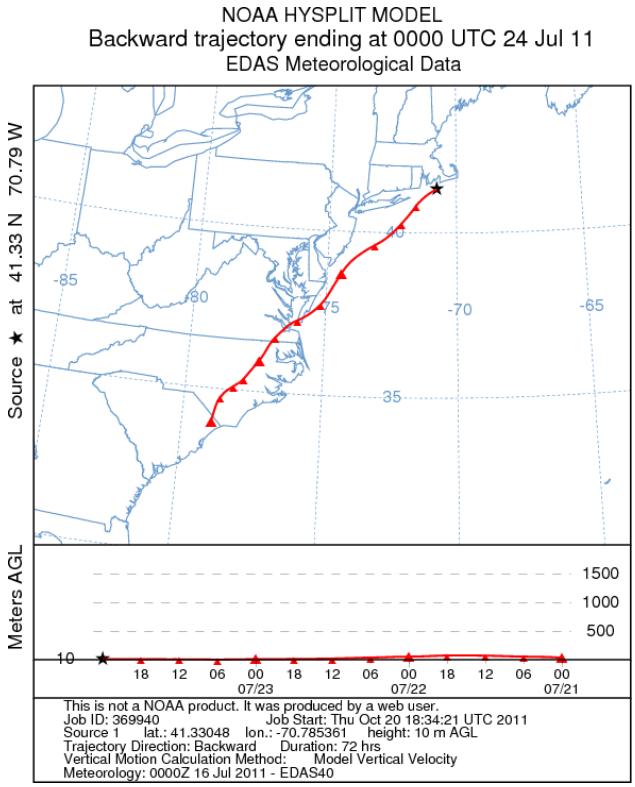
Job ID: 309926 Job Start: Thu Oct 20 18:23:46 UTC 2011
Source 1 lat.: 41.33048 lon.: -70.785361 height: 10 m AGL
Trajectory Direction: Backward Duration: 72 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 01 Sep 2010 - EDAS40


NOAA HYSPLIT MODEL
Backward trajectory ending at 1700 UTC 07 Jun 11
EDAS Meteorological Data
Source ★ at 41.33 N 70.79 W
Meters AGL
1500
1000
500
10
12 06 00 18 12 06 00 18 12 06 00 18
06/07 06/06 06/05
This is not a NOAA product. It was produced by a web user.
Job ID: 319929 Job Start: Thu Oct 20 18:26:11 UTC 2011
Source 1 lat.: 41.33048 lon.: -70.785361 height: 10 m AGL
Trajectory Direction: Backward Duration: 72 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 01 Jun 2011 - EDAS40

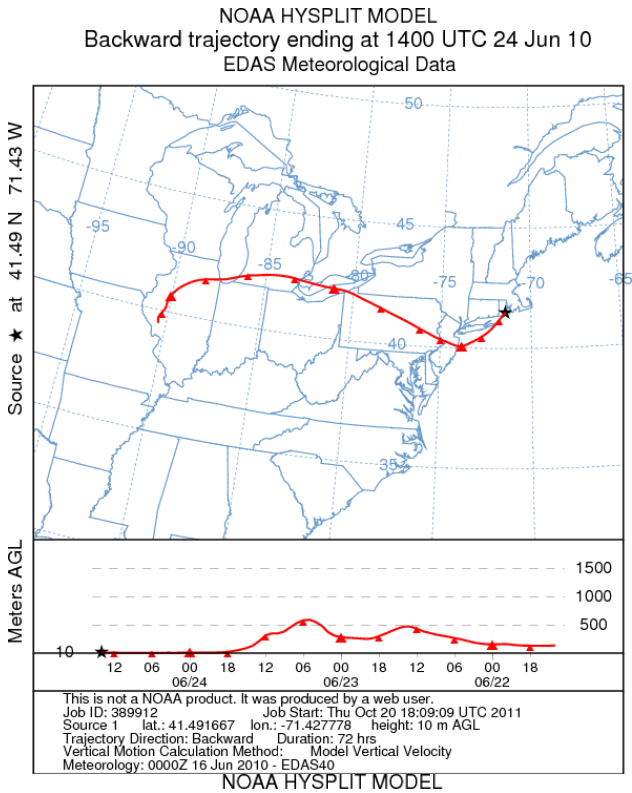
NOAA HYSPLIT MODEL
Backward trajectory ending at 2000 UTC 18 Jun 11
EDAS Meteorological Data
Source ★ at 41.33 N 70.79 W
Meters AGL
1500
1000
500
10
18 12 06 00 18 12 06 00 18 12 06 00
06/18 06/17 06/16
This is not a NOAA product. It was produced by a web user.
Job ID: 369933 Job Start: Thu Oct 20 18:29:04 UTC 2011
Source 1 lat.: 41.33048 lon.: -70.785361 height: 10 m AGL
Trajectory Direction: Backward Duration: 72 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 16 Jun 2011 - EDAS40

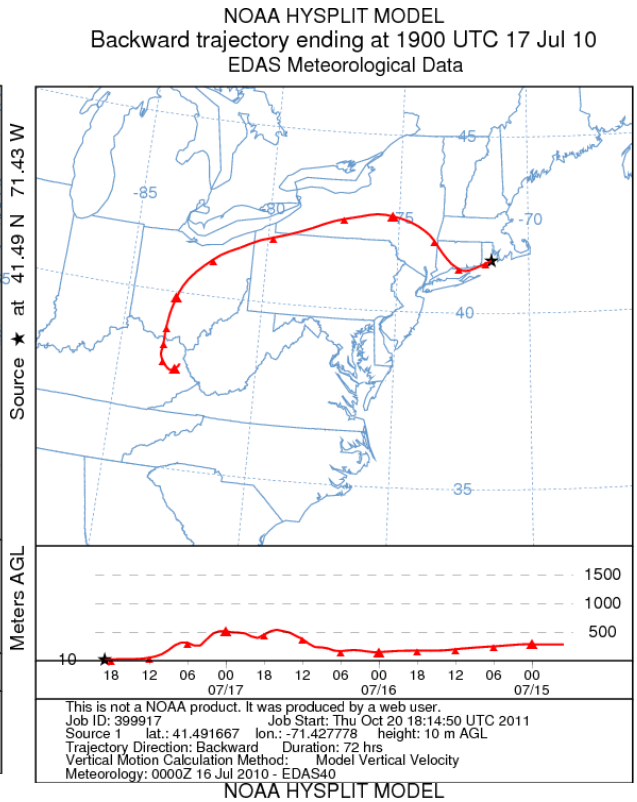

NOAA HYSPLIT MODEL
Backward trajectory ending at 1800 UTC 08 Jun 11
EDAS Meteorological Data
Source ★ at 41.33 N 70.79 W
Meters AGL
1500
1000
500
10
12 06 00 18 12 06 00 18 12 06 00 18
06/08 06/07 06/06
This is not a NOAA product. It was produced by a web user.
Job ID: 329930 Job Start: Thu Oct 20 18:27:19 UTC 2011
Source 1 lat.: 41.33048 lon.: -70.785361 height: 10 m AGL
Trajectory Direction: Backward Duration: 72 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 01 Jun 2011 - EDAS40

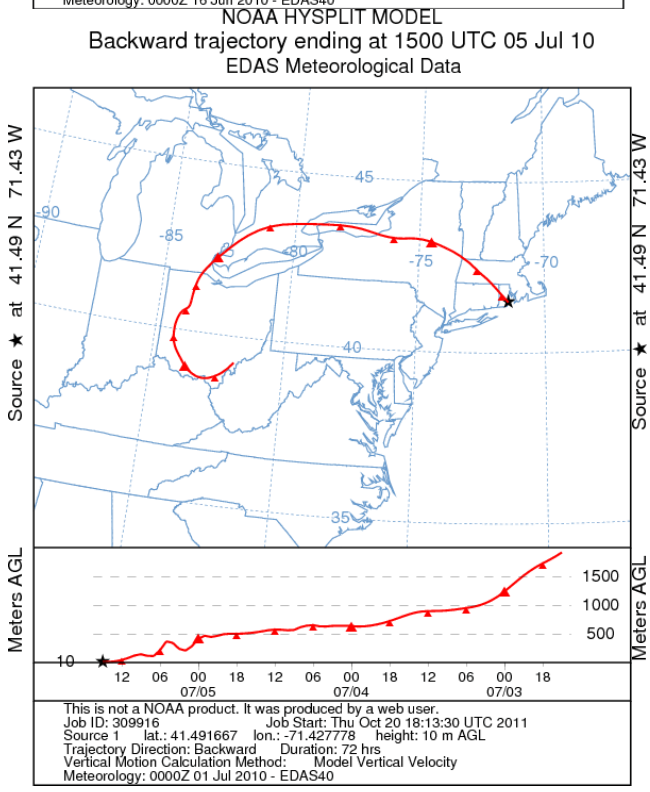

NOAA HYSPLIT MODEL
Backward trajectory ending at 2100 UTC 22 Jul 11
EDAS Meteorological Data
Source ★ at 41.33 N 70.79 W
Meters AGL
1500
1000
500
10
18 12 06 00 18 12 06 00 18 12 06 00
07/22 07/21 07/20
This is not a NOAA product. It was produced by a web user.
Job ID: 369939 Job Start: Thu Oct 20 18:33:43 UTC 2011
Source 1 lat.: 41.33048 lon.: -70.785361 height: 10 m AGL
Trajectory Direction: Backward Duration: 72 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 16 Jul 2011 - EDAS40

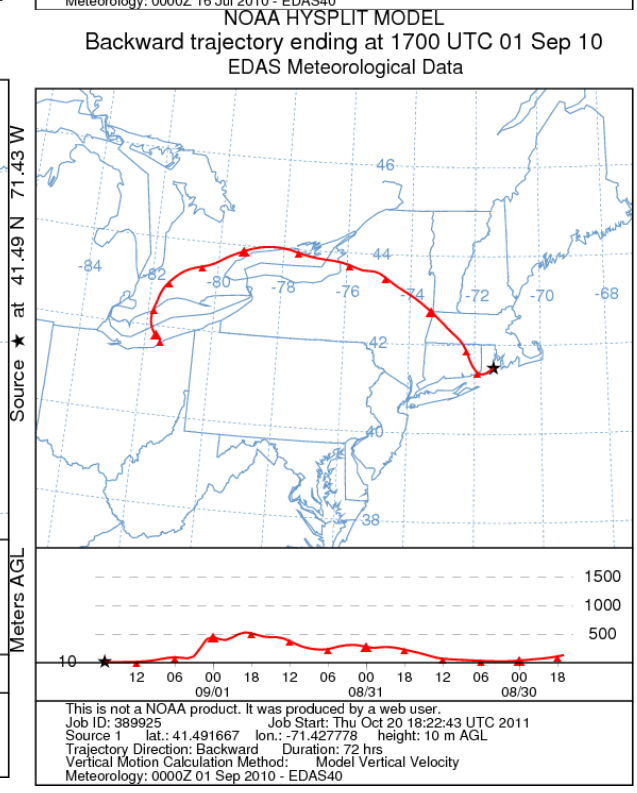

NOAA HYSPLIT MODEL
Backward trajectory ending at 0000 UTC 24 Jul 11
EDAS Meteorological Data
Source ★ at 41.33 N 70.79 W
-85
-80
-75
-70
-65
40
35
Meters AGL
1500
1000
500
10
18 12 06 00 18 12 06 00 18 12 06 00
07/23 07/22 07/21
This is not a NOAA product. It was produced by a web user.
Job ID: 369940 Job Start: Thu Oct 20 18:34:21 UTC 2011
Source 1 lat.: 41.33048 lon.: -70.785361 height: 10 m AGL
Trajectory Direction: Backward Duration: 72 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 16 Jul 2011 - EDAS40

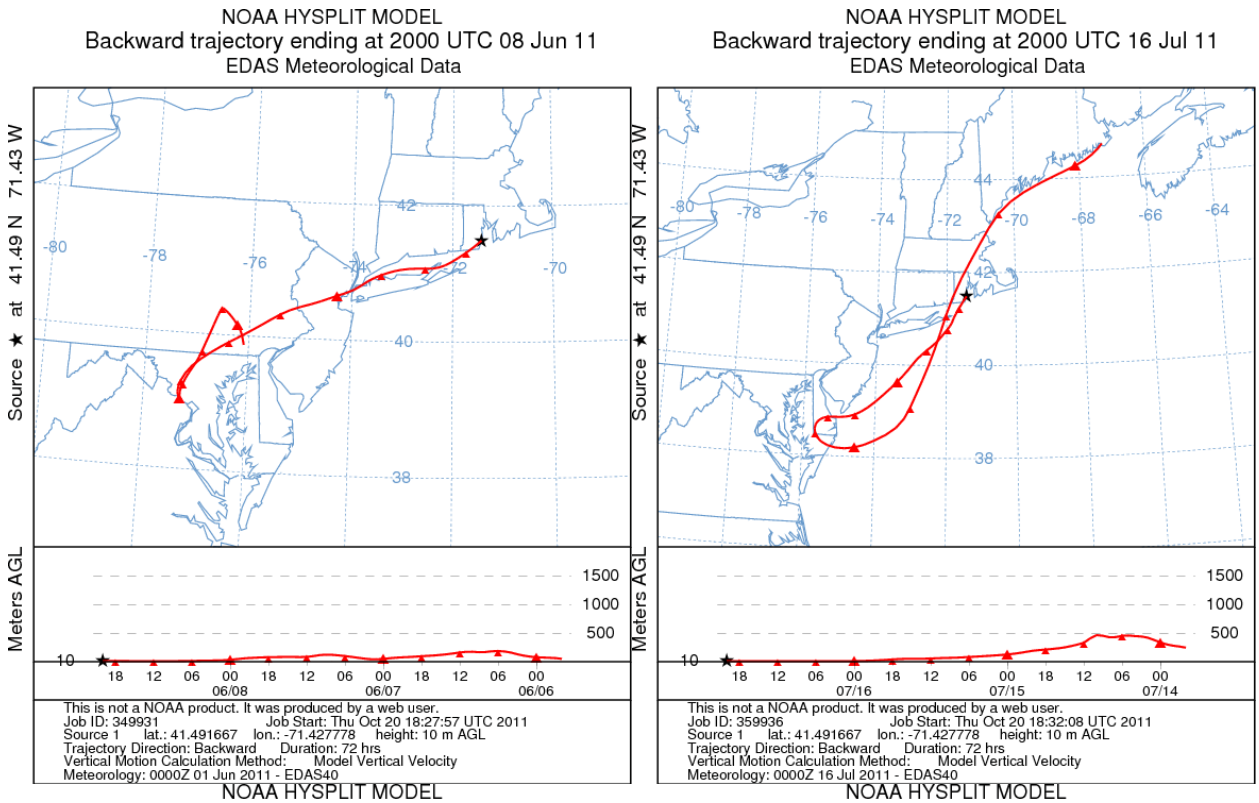
Back Trajectories for Days Greater than 75 ppb at Narragansett, RI



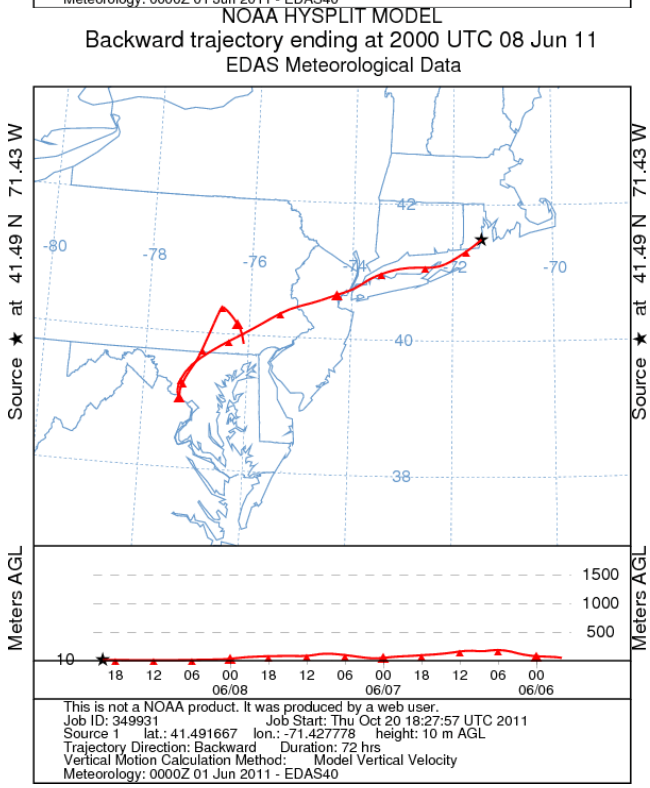


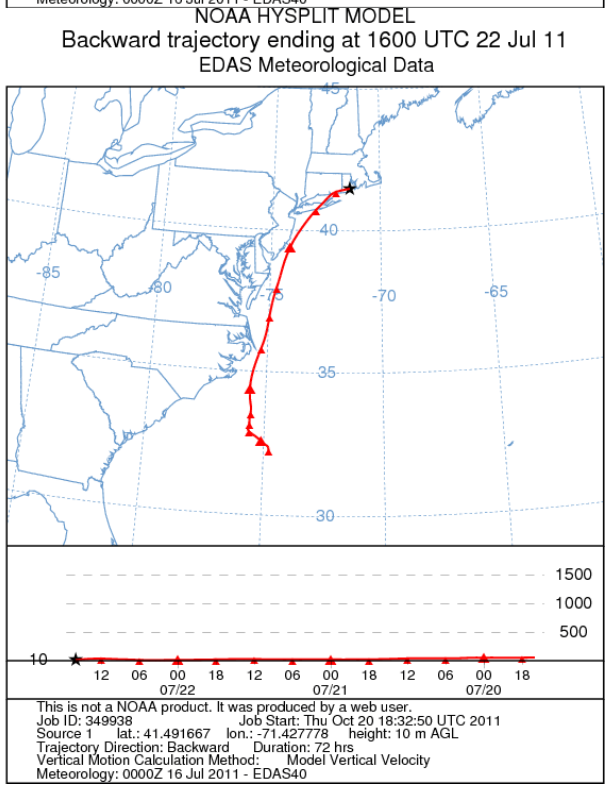





NOAA HYSPLIT MODEL
Backward trajectory ending at 2000 UTC 08 Jun 11
EDAS Meteorological Data
Source ★ at 41.49 N 71.43 W
Meters AGL
1500
1000
500
10
18 12 06 00 18 12 06 00 18 12 06 00
06/08 06/07 06/06
This is not a NOAA product. It was produced by a web user.
Job ID: 349931 Job Start: Thu Oct 20 18:27:57 UTC 2011
Source 1 lat.: 41.491667 lon.: -71.427778 height: 10 m AGL
Trajectory Direction: Backward Duration: 72 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 01 Jun 2011 - EDAS40

NOAA HYSPLIT MODEL
Backward trajectory ending at 2000 UTC 16 Jul 11
EDAS Meteorological Data
Source ★ at 41.49 N 71.43 W
Meters AGL
1500
1000
500
10
18 12 06 00 18 12 06 00 18 12 06 00
07/16 07/15 07/14
This is not a NOAA product. It was produced by a web user.
Job ID: 359936 Job Start: Thu Oct 20 18:32:08 UTC 2011
Source 1 lat.: 41.491667 lon.: -71.427778 height: 10 m AGL
Trajectory Direction: Backward Duration: 72 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 16 Jul 2011 - EDAS40


NOAA HYSPLIT MODEL
Backward trajectory ending at 2000 UTC 08 Jun 11
EDAS Meteorological Data
Source ★ at 41.49 N 71.43 W
Meters AGL
1500
1000
500
10
18 12 06 00 18 12 06 00 18 12 06 00
06/08 06/07 06/06
This is not a NOAA product. It was produced by a web user.
Job ID: 349931 Job Start: Thu Oct 20 18:27:57 UTC 2011
Source 1 lat.: 41.491667 lon.: -71.427778 height: 10 m AGL
Trajectory Direction: Backward Duration: 72 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 01 Jun 2011 - EDAS40


NOAA HYSPLIT MODEL
Backward trajectory ending at 1600 UTC 22 Jul 11
EDAS Meteorological Data
Source ★ at 41.49 N 71.43 W
Meters AGL
1500
1000
500
10
12 06 00 18 12 06 00 18 12 06 00 18
07/22 07/21 07/20
This is not a NOAA product. It was produced by a web user.
Job ID: 349938 Job Start: Thu Oct 20 18:32:50 UTC 2011
Source 1 lat.: 41.491667 lon.: -71.427778 height: 10 m AGL
Trajectory Direction: Backward Duration: 72 hrs
Vertical Motion Calculation Method: Model Vertical Velocity
Meteorology: 0000Z 16 Jul 2011 - EDAS40