



The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

Thomas S. Burack, Commissioner



March 2, 2012

Mr. Curt Spalding
Regional Administrator
USEPA New England, Region I
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: Maintenance Plan for New Hampshire's Former 1-hr Ozone Nonattainment Areas

Dear Administrator Spalding:

Pursuant to Section 110 of the federal Clean Air Act as amended, the New Hampshire Department of Environmental Services (NHDES) submits one paper copy and one electronic copy of this State Implementation Plan (SIP) revision containing a maintenance plan for New Hampshire's former 1-hr ozone nonattainment areas. The enclosed disk is an exact duplicate of the paper copy, as well as additional data files supporting Attachment A of the maintenance plan. NHDES has prepared this SIP revision in accordance with the general SIP submittal requirements of 40 CFR Part 51 Appendix V, EPA regulations and guidance on redesignations, and New Hampshire laws and regulations.

As Governor John Lynch's designee, I am requesting EPA's approval of this SIP revision, which addresses those areas in Cheshire, Hillsborough, Merrimack, Rockingham, and Strafford counties that were formerly nonattainment for the 1-hr ozone standard, but which were classified as attainment/unclassifiable for the 8-hr ozone standard.

EPA provided comments on the proposed SIP revision, which NHDES has addressed in the administrative documents attached to the enclosed plan, including documentation certifying the public process.

If you have any questions regarding this submittal, please contact Charles Martone at (603) 271-1089.

Sincerely,

Robert R. Scott
Director, Air Resources Division

rrs/chm

enclosure: NH Ozone Maintenance Plan SIP Revision w/ attachments
(on paper and disk)

cc: Anne Arnold, USEPA Region I

Revision to the
**New Hampshire
State Implementation Plan**

**Maintenance Plan for
Former 1-Hour Ozone Nonattainment Areas
in Cheshire, Hillsborough, Merrimack, Rockingham,
and Strafford Counties**

March 2, 2012



Air Resources Division

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1. INTRODUCTION

This maintenance plan, presented as a revision to New Hampshire's State Implementation Plan (SIP), addresses the anti-backsliding provisions of the Clean Air Act, Section 110(a)(1), with respect to the former 1-hour ozone standard after promulgation of the 1997 8-hour ozone standard. The maintenance plan (also known as "maintenance SIP") applies to former 1-hour ozone nonattainment areas constituting all of Cheshire County and portions of Hillsborough, Merrimack, Rockingham, and Strafford Counties.

1.1 Background

Under Section 110(a)(1), states are required to implement, maintain, and enforce national primary ambient air quality standards:

"Each State shall, after reasonable notice and public hearings, adopt and submit to the Administrator, within 3 years (or such shorter period as the Administrator may prescribe) after the promulgation of a national primary ambient air quality standard (or any revision thereof) under section 109 for any air pollutant, a plan which provides for implementation, maintenance, and enforcement of such primary standard in each air quality control region (or portion thereof) within such State..."

States are expected to meet these requirements through individualized State Implementation Plans. SIPs are dynamic documents describing the state's statutory and regulatory (i.e., enforceable) emission control measures that will be implemented to ensure compliance with the national standards. SIPs must be periodically reviewed and updated to meet administrative requirements, changing air quality conditions, changing emissions, and new or amended federal programs.

1.2 National Ozone Standards

Since the 1970s, EPA has established and periodically reviewed/revised the national ambient air quality standards (NAAQS) for ground-level ozone. The original 1-hour primary standard of 0.08 parts per million (ppm) for photochemical oxidants, promulgated by EPA in 1971 (*Federal Register*, 36 FR 8186), was revised in 1979 to a 1-hour standard of 0.12 ppm for ozone (44 FR 8202). In 1993, after a lengthy period of scientific review, litigation, and public input, EPA decided to retain the 0.12 ppm standard (58 FR 13008). (Note: The secondary ozone standard was set identical to the primary standard.)

On July 18, 1997, EPA published a final rule for a new 8-hour ozone standard of 0.08 ppm to replace the 1-hour standard (62 FR 38855), effective on September 16, 1997. This change was based on further scientific study concluding that the 1-hour standard did not provide adequate health protection against extended periods of moderately elevated ozone levels. The 1997 8-hour ozone NAAQS bore a more direct relationship to ozone concentrations associated with health effects.

As part of the transition to the more protective 8-hour standard, the agency issued rules determining that the 1-hour standard no longer applied in certain areas. EPA subsequently rescinded this action in response to litigation that created uncertainty as to when and whether the 8-hour standard would be fully implemented. A rule reinstating the 1-hour standard was published on July 20, 2000, and implementation of the newer standard was delayed for several years pending resolution of the legal issues. The Phase 1 implementation rule for the 8-hour ozone standard was published in final form on April 30, 2004 (69 FR 23857). On June 15, 2005, EPA revoked the 1-hour ozone standard for most areas of the country (including all of New Hampshire) and replaced it with the 8-hour ozone standard (69 FR 23857 and 70 FR 44470).

In 2008, EPA further strengthened the 8-hour NAAQS for ground-level ozone to 0.075 ppm, effective on May 27, 2008 (73 FR 16435). After reconsideration of the scientific evidence, on January 6, 2010, EPA proposed to reduce the standard to 0.060-0.070 ppm (75 FR 2938). In its final determination, however, headquarters clarified that "EPA fully intends to implement this current standard [0.075 ppm] as required under the Clean Air Act," (memo from Gina McCarthy, Assistant Administrator, to the Regional Air Division Directors, September 22, 2011). While this provides historical context, the 2008 revision of the ozone NAAQS is irrelevant to the anti-backsliding provisions that serve as the reason for this maintenance plan. This plan is therefore unaffected by EPA's most recent actions to strengthen the 8-hour ozone standard.

1.3 Attainment Status

The 1990 amendments to the Clean Air Act established an area classification system for attainment of the 1-hour ozone NAAQS. Under this system, all areas of the United States were designated as attainment, nonattainment, or unclassifiable, depending on the available monitoring data for those areas. In addition, attainment areas could be either classified or unclassifiable according to the adequacy of the monitoring data.

Nonattainment areas were further classified as marginal, moderate, serious, severe, or extreme, to represent progressive levels of exceedance of the 1-hour ozone standard. The 1990 amendments also established mandatory SIP submission requirements based on the ozone nonattainment designation.

New Hampshire's area designations and classifications for the 1-hour ozone standard are codified at 40 CFR 81.330 (Table 1-1). Counties in the northern and central parts of the state were designated as unclassifiable/attainment areas for 1-hour ozone. The more populous southeastern counties of Strafford, Rockingham, and Hillsborough, were designated as serious nonattainment areas. South-centrally located Merrimack County was classified as a marginal nonattainment area. Cheshire County, in the state's rural southwest corner, was designated as a nonattainment area on the basis of incomplete data.

With the 1-hour area classifications already reinstated, on July 24, 2000, NHDES submitted to EPA its attainment classification recommendations for the newer, 8-hour standard. This submittal was followed by another, on July 15, 2003, that included consideration of Consolidated Metropolitan Statistical Area (CMSA) boundaries and other regional considerations in making recommendations for determining nonattainment areas for 8-hour ozone.

Final attainment classifications for the 8-hour ozone standard appeared in the *Federal Register* on April 30, 2004 (69 FR 23857), with an effective date of June 15, 2004. EPA designated the New Hampshire portion of the Boston-Manchester-Portsmouth area as a moderate nonattainment area for the 8-hour ozone NAAQS (Table 1-2) with a maximum attainment date of June 15, 2010. It is worth noting that no monitor in New Hampshire had an 8-hour ozone design value equal to or greater than 0.092 ppm, a situation that normally would have put the nonattainment area in the marginal classification. However, NHDES agreed to the moderate classification to provide regional consistency with contiguous nonattainment areas extending from southern Maine to Massachusetts.

**Table 1-1. New Hampshire Designations/Classifications for 1-Hour Ozone Standard
Revised as of July 1, 2002 (40 CFR 81.330)**

Area	County	Cities and Towns Included	Designation/ Classification
<i>Nonattainment Areas</i>			
Manchester Area	Merrimack (all)	Allenstown, Andover, Boscawen, Bow, Bradford, Canterbury, Chichester, Concord, Danbury, Dunbarton, Epsom, Franklin, Henniker, Hill, Hooksett, Hopkinton, Loudon, New London, Newbury, Northfield, Tilton, Pembroke, Pittsfield, Salisbury, Sutton, Warner, Webster, Wilmot	Nonattainment**/ Marginal**
	Hillsborough (part)	Antrim, Bedford, Bennington, Deering, Francetown, Goffstown, Greenfield, Greenville, Hancock, Hillsborough, Lyndeborough, Manchester, Mason, New Boston, New Ipswich, Peterborough, Sharon, Temple, Weare, Windsor	Nonattainment**/ Marginal**
	Rockingham (part)	Auburn, Candia, Chester, Deerfield, Epping, Fremont, Northwood, Nottingham, Raymond	Nonattainment**/ Marginal**
Boston-Lawrence- Worcester Area	Hillsborough (part)	Pelham, Amherst, Brookline, Hollis, Hudson, Litchfield, Merrimack, Milford, Mont Vernon, Nashua, Wilton.	Nonattainment*/ Serious**
	Rockingham (part)	Atkinson, Brentwood, Danville, Derry, East Kingston, Hampstead, Hampton Falls, Kensington, Kingston, Londonderry, Newton, Plaistow, Salem, Sandown, Seabrook, South Hampton, Windham	Nonattainment**/ Serious**
Portsmouth-Dover- Rochester Area	Rockingham (part)	Exeter, Greenland, Hampton, New Castle, Newfields, Newington, Newmarket, North Hampton, Portsmouth, Rye, Stratham	Nonattainment**/ Serious**
	Strafford (all)	Barrington, Dover, Durham, Farmington, Lee, Madbury, Middleton, Milton, New Durham, Rochester, Rollinsford, Somersworth, Strafford	Nonattainment**/ Serious**
Cheshire County	Cheshire (all)	Alstead, Chesterfield, Dublin, Fitzwilliam, Gilsum, Harrisville, Hinsdale, Jaffrey, Keene, Marlborough, Marlow, Nelson, Richmond, Rindge, Roxbury, Stoddard, Sullivan, Surry, Swanzey, Troy, Walpole, Westmoreland, Winchester	Nonattainment**/ Incomplete Data**
<i>Unclassifiable/Attainment Areas</i>			
Belknap County	Belknap	all	Unclassifiable/ Attainment
Sullivan County	Sullivan	all	Unclassifiable/ Attainment
AQCR 107 Androscoggin Valley Interstate	Coos	all	Unclassifiable/ Attainment
AQCR 149 Central New Hampshire Interstate	Carroll	all	Unclassifiable/ Attainment
	Grafton	all	Unclassifiable/ Attainment

* October 18, 2000

** January 16, 2001

Table 1-2. New Hampshire Designations/Classifications for the 1997 8-Hour Ozone Standard Effective June 15, 2004 (FR 69 23857)

Area	County	Cities and Towns Included	Designation/Classification
<i>Nonattainment Areas</i>			
Boston-Manchester-Portsmouth Area (Southeast New Hampshire Area)	Hillsborough (part)	Amherst, Bedford, Brookline, Goffstown, Hollis, Hudson, Litchfield, Manchester, Merrimack, Milford, Nashua, Pelham	Nonattainment Subpart 2/Moderate
	Merrimack (part)	Hooksett	Nonattainment Subpart 2/Moderate
	Rockingham (part)	Atkinson, Auburn, Brentwood, Candia, Chester, Danville, Derry, E. Kingston, Epping, Exeter, Fremont, Greenland, Hampstead, Hampton, Hampton Falls, Kensington, Kingston, Londonderry, New Castle, Newfields, Newington, Newmarket, Newton, North Hampton, Plaistow, Portsmouth, Raymond, Rye, Salem, Sandown, Seabrook, South Hampton, Stratham, Windham	Nonattainment Subpart 2/Moderate
	Strafford (part)	Dover, Durham, Rochester, Rollinsford, and Somersworth	Nonattainment Subpart 2/Moderate
<i>Unclassifiable/Attainment Areas</i>			
Hillsborough County	Hillsborough (part)	Antrim, Bennington, Deering, Francestown, Greenfield, Greenville, Hancock, Hillsborough, Lyndeborough, Mason, Mont Vernon, New Boston, New Ipswich, Peterborough, Sharon, Temple, Weare, Wilton, Windsor	Unclassifiable/Attainment
Merrimack County	Merrimack (part)	Allenstown, Andover, Boscawen, Bow, Bradford, Canterbury, Chichester, Concord, Danbury, Dunbarton, Epsom, Franklin, Henniker, Hill, Hopkinton, Loudon, New London, Newbury, Northfield, Pembroke, Pittsfield, Salisbury, Sutton, Warner, Webster, Wilmot	Unclassifiable/Attainment
Rockingham County	Rockingham (part)	Deerfield, Northwood, Nottingham	Unclassifiable/Attainment
Strafford County	Strafford (part)	Barrington, Farmington, Lee, Madbury, Middleton, Milton, New Durham, Strafford	Unclassifiable/Attainment
Belknap County	Belknap	all	Unclassifiable/Attainment
Carroll County	Carroll	all	Unclassifiable/Attainment
Cheshire County	Cheshire	all	Unclassifiable/Attainment
Coos County	Coos	all	Unclassifiable/Attainment
Grafton County	Grafton	all	Unclassifiable/Attainment
Sullivan County	Sullivan	all	Unclassifiable/Attainment

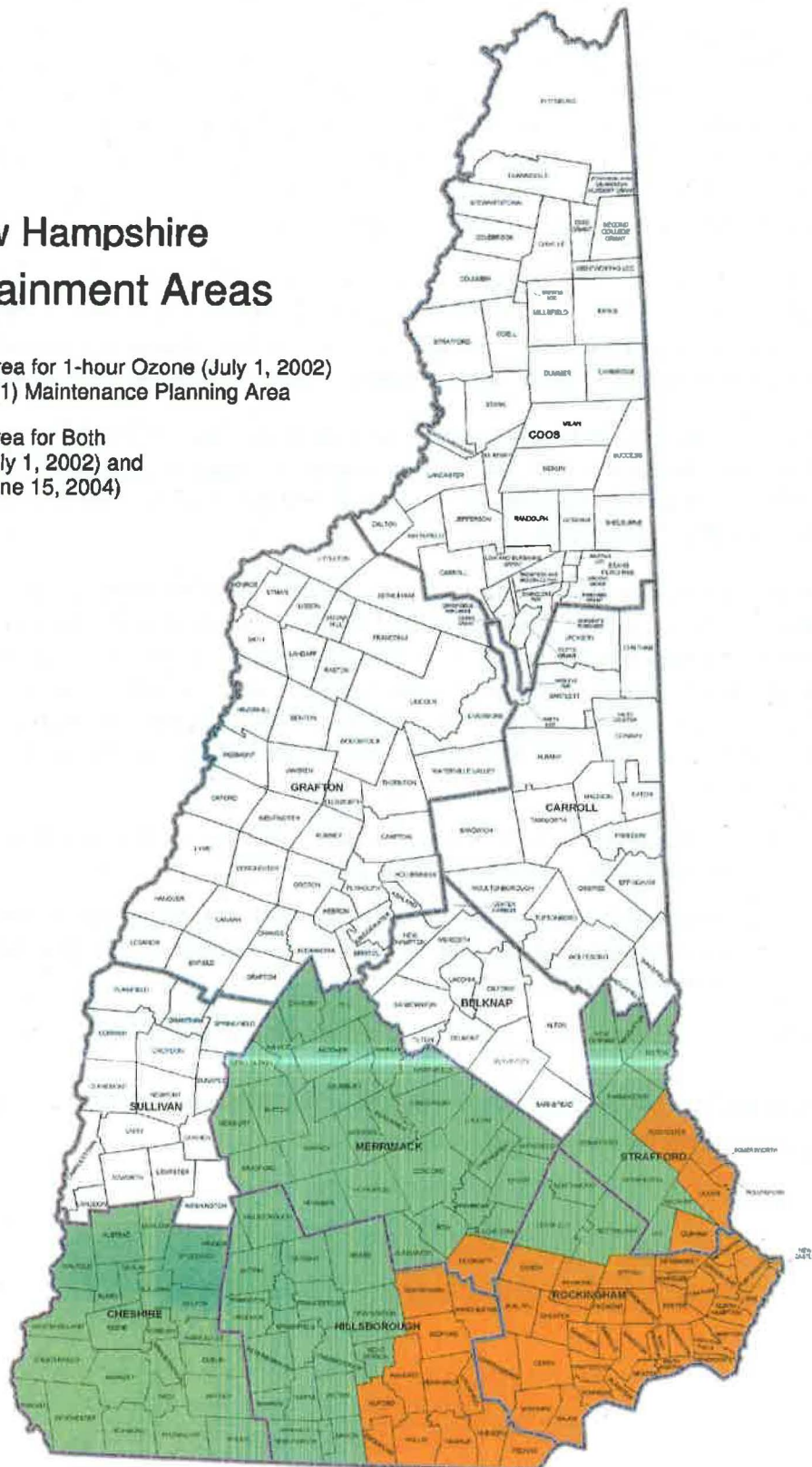
The nonattainment areas listed above for the 1-hour and 8-hour ozone standards are represented graphically in the map of Figure 1-1.

Note that these area classifications applied at specific dates during the first half of the previous decade. Because of regional progress in reducing emissions, some locations formerly identified as nonattainment areas have since achieved attainment. Also, because of recent improvements in monitoring, some locations formerly designated as unclassified attainment areas could now be redesignated as classified attainment areas. **The classifications as listed here are relevant to this maintenance SIP.**

Figure 1-1. New Hampshire 1-hour and 8-hour Nonattainment Areas

State of New Hampshire Ozone Nonattainment Areas

- Nonattainment Area for 1-hour Ozone (July 1, 2002)
= Section 110(a)(1) Maintenance Planning Area
- Nonattainment Area for Both
1-hour Ozone (July 1, 2002) and
8-hour Ozone (June 15, 2004)



1.4 SIP Revisions

On June 30, 1998, NHDES submitted to EPA an ozone attainment demonstration for the New Hampshire portion of the Boston-Lawrence-Worcester 1-hour ozone serious nonattainment area. As required under the Clean Air Act, this SIP revision was a plan for achieving attainment of the 1-hour ozone standard in the affected area. The final rule approving the attainment demonstration SIP was published on December 6, 2002 (67 FR 72574), and became effective on January 6, 2003. The final rule set an attainment date of November 15, 2007, and also approved the attainment-level vehicle emissions budgets for NO_x and VOC for the New Hampshire portion of the Boston-Lawrence-Worcester serious nonattainment area for use in meeting transportation conformity.

On December 30, 2004, NHDES submitted the required mid-course review for the New Hampshire portion of the Boston-Lawrence-Worcester 1-hour ozone serious nonattainment area. EPA gave notice, on October 12, 2005 (70 FR 59338), that New Hampshire had submitted an acceptable mid-course review and fulfilled its commitment made in the attainment demonstration plan.

On December 14, 2011, EPA published a proposed rule (76 FR 77739) determining that the Boston-Lawrence-Worcester MA-NH serious one-hour ozone nonattainment area met the November 15, 2007, deadline for attaining the one-hour NAAQS for ozone, based on quality-assured, certified data for the 2005-2007 monitoring period.

When the attainment classifications for the 1997 8-hour ozone standard were issued in mid-2004, some locations in New Hampshire that were previously found to be in nonattainment for the 1-hour ozone standard were determined to be in attainment for the 8-hour ozone standard. Although the 8-hour standard superseded the 1-hour standard, anti-backsliding provisions established at 40 CFR 51.905 required states to develop maintenance plans to prevent degradation of air quality in former nonattainment areas that were reclassified to attainment. In this instance, a maintenance plan was required for:

- Any attainment area or unclassifiable area for the 8-hour ozone standard that was formerly in nonattainment for the 1-hour ozone standard, or
- Any attainment area or unclassifiable area for the 8-hour ozone standard that was formerly in nonattainment for the 1-hour ozone standard but that achieved attainment with an approved maintenance plan.

Table 1-3 lists the specific locations in New Hampshire that meet these qualifications and are covered by this maintenance SIP. They include all, or portions of, the following five southern New Hampshire counties: Cheshire, Hillsborough, Merrimack, Rockingham, and Strafford (see the green-shaded area in the map of Figure 1-1).

2. ATTAINMENT INVENTORY AND MAINTENANCE DEMONSTRATION

The maintenance plan must demonstrate that the planning area will remain in compliance with the 8-hour ozone standard for the 10-year period following the effective date of designation as unclassifiable/attainment. To make this demonstration, a state may use either an emissions inventory approach or other methods such as modeling. New Hampshire is using the emissions inventory approach to demonstrate that future emissions of ozone precursors (NO_x and VOC) will not exceed attainment inventory levels. Thus, the analysis requires development of a baseline attainment inventory as well as an inventory of future emissions for the projection year, at a minimum. For areas (including New Hampshire) with an effective attainment designation date of June 15, 2004, for the 1997 8-hour ozone standard, the maintenance plan must project attainment for 2014. In addition, an emissions inventory was developed for an interim year (2012) to demonstrate that maintenance of the ozone standard is likely to continue throughout the 10-year period.

New Hampshire's 2002 attainment inventory and projected 2012 and 2014 inventories presented in this section are divided into the following general emissions categories:

- *Point Sources*, which represent discrete facilities. These sources must usually meet certain emission thresholds to be included as point sources and therefore generally represent larger facilities.
- *Area Sources*, which represent facilities and activities too numerous and widespread to be inventoried individually but which collectively may account for significant emissions.
- *Non-Road Mobile Sources*, including aircraft, locomotives, commercial marine vessels, construction vehicles, lawn & garden equipment, and other mobile vehicles and equipment that are not meant to be operated on roadways.
- *On-Road Mobile Sources*, including cars, trucks, buses, motorcycles, and other vehicles that operate on public roadways.

To complete the inventories, NHDES followed EPA guidance for making emission estimates of NO_x and VOC on a typical summer day. The inventories were prepared for the five southern New Hampshire counties of Cheshire, Hillsborough, Merrimack, Rockingham and Strafford. Note, however, that the maintenance planning area includes only parts of Hillsborough, Merrimack, Rockingham and Strafford Counties. It is sometimes difficult or impractical to apportion emissions to a resolution finer than the county level; and the irregular geography of the maintenance planning area presented a particular challenge in this regard. However, because the maintenance planning area constitutes a large geographic portion of the entire 5-county area, NHDES reasoned that emission trends in the five southern counties would serve as an acceptable proxy for emissions trends in the maintenance planning area; the additional effort required to extract the estimates specific to the planning area would add little value to the analysis. Therefore, to the extent that the inventory data show declining emissions in the 5-county area as a whole, the data also reflect improving air quality within the maintenance planning area.

2.1 2002 Attainment Inventory

The maintenance plan starts with a baseline attainment inventory of emissions, which details the volatile organic compounds (VOC) and oxide of nitrogen (NO_x) emissions for the planning area on a "typical summer day." The Phase 1 implementation rule for the 8-hour ozone standard specifies that the 10-year maintenance period begins on the effective date of the 8-hour ozone NAAQS

**Table 1-3. 1-Hour Ozone Nonattainment/Maintenance Areas Designated
Unclassifiable/Attainment for the 1997 8-Hour Standard as of June 15, 2004
(= Maintenance Planning Area)¹**

Area	County	Cities and Towns Included
Boston-Lawrence-Worcester Area	Hillsborough (part)	Mont Vernon, Wilton
Manchester Area	Hillsborough (part)	Antrim, Bennington, Deering, Francestown, Greenfield, Greenville, Hancock, Hillsborough, Lyndeborough, Mason, New Boston, New Ipswich, Peterborough, Sharon, Temple, Weare, Windsor
	Merrimack (part)	Allenstown, Andover, Boscawen, Bow, Bradford, Canterbury, Chichester, Concord, Danbury, Dunbarton, Epsom, Franklin, Henniker, Hill, Hopkinton, Loudon, New London, Newbury, Northfield, Pembroke, Pittsfield, Salisbury, Sutton, Warner, Webster, Wilmot
Rockingham County	Rockingham (part)	Deerfield, Northwood, Nottingham
Strafford County	Strafford (part)	Barrington, Farmington, Lee, Madbury, Middleton, Milton, New Durham, Strafford
Cheshire County	Cheshire (all)	Alstead, Chesterfield, Dublin, Fitzwilliam, Gilsum, Harrisville, Hinsdale, Jaffrey, Keene, Marlborough, Marlow, Nelson, Richmond, Rindge, Roxbury, Stoddard, Sullivan, Surry, Swanzey, Troy, Walpole, Westmoreland, Winchester

1.5 Maintenance Plan Components

The maintenance plan must be in the form of a SIP revision providing for continued maintenance of the 8-hour ozone NAAQS in the planning area for 10 years from the effective date of the area's designation as unclassifiable/attainment. The maintenance plan must contain, at a minimum, the following elements:

- an attainment inventory,
- a maintenance demonstration,
- provisions for continued ambient air quality monitoring,
- a contingency plan, and
- verification of continued attainment.

The required plan elements are addressed in the sections which follow.

¹ Source: Table 2 of EPA's "Maintenance Plan Guidance Document for Certain 8-hour Ozone Areas under Section 110(a)(1) of the Clean Air Act," May 20, 2005.

designation. Although a state may use any of the three years upon which the 8-hour ozone designation was based (i.e., 2001, 2002 and 2003), EPA recommends that areas use 2002 as the attainment inventory base year.²

NHDES previously prepared a 2002 Periodic Emissions Inventory for ozone precursors to satisfy New Hampshire's obligations under the Consolidated Emissions Reporting Rule (CERR). NHDES formally submitted its 2002 Periodic Emissions Inventory to EPA on June 7, 2007 (cover letter to Robert Varney). For the purposes of this maintenance plan, New Hampshire is using that inventory as a basis for its 2002 attainment inventory for all source categories.

Affected point-source facilities in New Hampshire are required to report their emissions on an annual basis. The reporting requirements are specified under New Hampshire's air regulations, air permitting program, and the CERR. The data submitted by these point-source facilities are extensively cross-checked and quality assured by NHDES staff before eventual submittal to EPA. Further details regarding New Hampshire point source data collection and quality assurance programs are available in Section A, "Point Sources," of the documentation for New Hampshire's 2002 Periodic Emissions Inventory.

The methodologies that New Hampshire used to prepare its 2002 periodic area source emissions inventory came primarily from EPA's Emissions Inventory Improvement Program (EIIP). Methodologies for specific area source categories can be found in EIIP Volume 3, *Area Sources*, available at <http://www.epa.gov/ttn/chief/eiip/techreport/volume03/index.html>. Calculations for many area source categories are based on variables such as population, employment, and fuel consumption data. Detailed descriptions of the methodologies used in the 2002 area source inventory can be found in Section B, "Area Source Emissions," of the documentation for New Hampshire's 2002 Periodic Emissions Inventory.

For the non-road mobile category, New Hampshire used the appropriate models for estimating non-road vehicle emissions, including the Federal Aviation Agency's (FAA's) Emissions & Dispersion Modeling System (EDMS) for aircraft and airport ground service equipment and EPA's NONROAD model for other non-road equipment types. New Hampshire also used applicable references and methodologies for estimating emissions for those equipment types not included in the EDMS and NONROAD models such as locomotives and CMVs. Detailed descriptions of the methodologies used by New Hampshire in its 2002 non-road mobile inventory can be found in the non-highway mobile sources portion of Section B, "Area Source Emissions" of the documentation for New Hampshire's 2002 Periodic Emissions Inventory.

For on-road mobile sources, New Hampshire used vehicle-miles-traveled (VMT) data obtained from the New Hampshire Department of Transportation and EPA's MOVES motor vehicle emission factors model.

2.2 2012 and 2014 Projected Inventories

In accordance with EPA guidance, NHDES prepared an estimate of ozone-precursor emissions projected to 10 years after June 15, 2004, the effective date of the 8-hour ozone attainment designation. NHDES also prepared emission estimates for the interim year 2012. For both projected inventories, NHDES used the Economic Growth and Analysis System (EGAS) Version

² EPA's Consolidated Emissions Reporting Rule (CERR) already requires the development of a 2002 inventory (40 CFR Part 51, Subpart A, 67 FR 39602, June 10, 2002).

5.0 to develop the applicable growth factors (except for NONROAD model sources and on-road mobile sources, as noted below). These growth factors were matched to the appropriate point, area, and mobile source categories using Source Classification Codes (SCC).

With respect to area sources, New Hampshire has adopted or is evaluating various control measures for a number of VOC source categories such as solvent cleaning, architectural surface coating, etc. For those measures that are not yet SIP-approved, the attendant emission reductions benefits are omitted from the 2012 and 2014 inventories. As a consequence of this conservative approach, it is anticipated that the actual projected emissions in those years will be lower than the projected emissions presented herein.

Because analysis year is an inherent input into the NONROAD model, projected 2012 and 2014 non-road mobile emissions were estimated directly for those non-road equipment categories that are included in the model. For other non-road mobile categories such as aircraft, locomotives, and CMVs, the appropriate EGAS growth factors were used. For commercial aircraft and airport ground service equipment, the EGAS growth factors were applied to the specific activities (e.g., aircraft landing-takeoff operations); and the growth-adjusted values were then input into the EDMS model. (Note: The EDMS model uses the analysis year to select the appropriate emission factors.)

For on-road mobile sources, future-year VMT data was derived using trends in historical VMT from the Federal Highway Administration (FHWA) and from the Metropolitan Planning Organizations (MPOs) that represent New Hampshire's ozone nonattainment area. The transportation demand models used by the MPOs utilize population, employment, and other economic factors to growth-adjust future-year VMT. Vehicle population data was adjusted for subsequent years using the growth factors from Table 3-14 of MOVES2010 Highway Vehicle Population and Activity Data, EPA-420-R-10-026, November 2010.

2.3 Maintenance Demonstration

Table 2-1 summarizes the 2002 attainment inventory and the projected 2012 and 2014 inventories for the five southern New Hampshire counties that encompass the Section 110(a)(1) maintenance planning area. As the inventory data show, total emissions of NO_x and VOC are anticipated to decrease significantly through the period ending in 2014.

Table 2-1. 2002 vs. 2012 and 2014 NO_x and VOC Emissions for Cheshire, Hillsborough, Merrimack, Rockingham, and Strafford Counties (pounds per day)

Source Category	NO _x			VOC		
	2002	2012	2014	2002	2012	2014
Point	67,347	48,358	50,739	15,898	6,696	7,005
Area	10,516	9,091	9,134	93,778	85,443	91,068
Non-Road Mobile	49,787	36,131	31,215	68,223	40,210	35,121
On-Road Mobile	261,303	75,202	62,347	87,161	36,904	34,245
Total	388,953	168,782	153,435	265,060	169,253	167,439

The figures shown above for the 2002 attainment inventory differ somewhat from those previously submitted for the 2002 Periodic Emissions Inventory. The reasons for these differences are as follows:

- The on-road mobile emissions estimates for the maintenance plan were calculated with MOVES, which was not available at the time that the 2002 Periodic Emissions Inventory was prepared. On-road mobile emissions estimates for the 2002 Periodic Emissions Inventory were calculated using MOBILE6.2 emission factors.
- Similarly, emissions estimates for Stage II vapor recovery vehicle refueling (SCC 25-01-060-100) for the maintenance plan were calculated with MOVES and were included and reported in the on-road mobile category. Stage II emissions estimates for the 2002 Periodic Emissions Inventory were calculated using MOBILE6.2 emission factors and were reported in the area source category. Since this category is now calculated with MOVES and included under on-road mobile, the MOBILE6.2-based Stage II refueling emissions estimates were removed from the area source inventory. This resulted in an adjustment to the 2002 maintenance plan area source inventory of -2,638 pounds per day of VOC when compared with the previously submitted 2002 Periodic Emissions Inventory.
- In compiling the 2002 figures for the maintenance plan, it was discovered that emissions estimates for the industrial wood combustion category (SCC 21-02-008-000) should not have been calculated and reported under the area source category. All industrial wood combustion in 2002 would have occurred at permitted point source facilities, and making an area source estimate for this category caused double-counting. Therefore, the area source estimate for industrial wood combustion was removed. This resulted in a correction to the 2002 maintenance plan area source inventory of -25,357 and -880 pounds per day of NOx and VOC respectively when compared with the previously submitted 2002 Periodic Emissions Inventory.

The projected reductions in 2012 and 2014 are due to the various federal and state programs to control emissions from non-road and on-road mobile sources and to the gradual replacement over time of older, more polluting vehicles with newer, cleaner ones. Contributing to projected emission reductions from the non-road mobile sector are the following federal programs:

- "Control of Air Pollution; Determination of Significance for Nonroad Sources and Emissions Standards for New Nonroad Compression Ignition Engines at or above 37 Kilowatts," 59 FR 31306, June 17, 1994.
- "Control of Emissions of Air Pollution from Nonroad Diesel Engines," 63 FR 56967, October 23, 1998.
- "Control of Emissions from Nonroad Large Spark-Ignition Engines and Recreational Engines (Marine and Land-Based)," final rule, 67 FR 68241, November 8, 2002.
- "Control of Emissions of Air Pollution from Nonroad Diesel Engines and Fuel." final rule, April 2004.

Also contributing to projected emission reductions are the following federal/state onroad mobile source control measures:

- Reformulated gasoline in Hillsborough, Merrimack, Rockingham, and Strafford Counties;
- An enhanced safety inspection program, including a vehicle anti-tampering inspection for vehicles less than 20 years old;

- On-board diagnostics testing for 1996 and newer vehicles in lieu of the anti-tampering inspection;
- Participation in the National Low Emission Vehicle (Northeast) program;
- The Federal Tier II vehicle standards and reduced gasoline sulfur limits.

Regarding stationary sources, it should be noted that two relatively large VOC-emitting sources (Batesville Manufacturing, Inc. and Venture Holdings) have closed since the time of the 2002 inventory. However, because NHDES has retained the emission reduction credits from these facility closures for possible future use, these emissions have been retained in the 2012 and 2014 inventories.

The inventory data clearly demonstrate that total emissions of ozone precursors within the five-county region are projected to decline between 2002 and 2014, indicating continued attainment of the 1997 8-hour ozone standard in the maintenance planning area. All of the technical data files associated with the 2002 attainment inventory and the 2012 and 2014 projected inventories are enclosed on CD-ROM as Attachment A.

Section 110 of the Clean Air Act requires individual states to prevent air pollution emissions that would cause nonattainment of the NAAQS in downwind states. As NHDES has previously observed, over 92 percent of air pollution is transported into the state from other areas during periods of poor air quality.³ Through active participation in the Ozone Transport Commission (OTC), the Northeast States for Coordinated Air Use Management (NESCAUM), and other regional organizations, NHDES has cooperated extensively with upwind states and EPA to reduce emissions and achieve attainment of the 8-hour ozone standard. While New Hampshire's continued attainment of this standard will depend on the success of in-state control measures, future attainment will depend to an even greater degree on the efficacy of super-regional control measures that reduce ozone and ozone-precursor transport into New Hampshire.

³ New Hampshire Department of Environmental Services, "Air Pollution Transport and How It Affects New Hampshire," May 2004.

3. AMBIENT AIR QUALITY MONITORING

The maintenance plan for the 1997 8-hour ozone standard must include provisions for the operation of an ambient air quality modeling network to verify continued maintenance of the 8-hour ozone standard in the planning area. NHDES has monitoring stations throughout the state that record criteria pollutant levels and other air quality data. Table 3-1 presents 8-hour ozone monitoring data for the most recent three-year period from monitors in the five southernmost counties of Cheshire, Hillsborough, Merrimack, Rockingham, and Strafford. The 2010-2011 design values and 2012 threshold values provide further indication that the maintenance area is likely to continue meeting the 1997 8-hour ozone standard for the duration of the planning period. Based on quality-assured data through for the 2011 ozone season, the most recent design values were in the low- to mid-60's parts per billion (ppb) range for most sites, and none was higher than 70 ppb.

Table 3-1. 8-Hour Ozone Monitoring Data: 2012 Threshold Values and 2010-2011 Design Values Based on Fourth-Highest Annual Maxima (ppb)

Monitor Location	AQS Number	4 th Highest Value				Design Value*		2012 Threshold Value**	Most Recent Year at or above Threshold	
		2008	2009	2010	2011	2010	2011		1 st Highest	4 th Highest
Keene	330050007	68	62	64	62	64	62	129	None	None
Peterborough	330115001	76	72	77	62	75	70	116	None	None
Nashua	330111011	67	66	67	65	66	66	123	None	None
Manchester	330110020	64	60	63	***	62	***	***	None	None
Concord	330131007	67	64	68	64	66	65	123	None	None
Portsmouth	330150014	69	70	66	64	68	66	125	1988	None
Rye	330150016	75	68	66	66	69	66	123	1991	None

* Example: The 2010 design value is the 3-year average of the annual fourth-highest 8-hour ozone concentration for the period 2008-2010.

** The 2012 threshold value is the fourth-highest monitored daily maximum 8-hour ozone value during the 2012 ozone season that would cause the 2012 design value to exceed the 1997 8-hour ozone NAAQS.

*** No data; monitor was moved to Londonderry in 2011.

New Hampshire is committed to the continuing operation of an effective air quality monitoring network to verify the area's attainment status in accordance with 40 CFR Part 58, to the extent that federal funding assistance remains sufficient for this purpose. New Hampshire proposes no modifications to the existing monitoring network at this time. Any future proposal to modify the monitoring network will be accompanied by supporting technical and statistical analyses as necessary. Final monitoring network design shall be subject to the approval of the EPA Regional Administrator.

4. CONTINGENCY PLAN

As established at 40 CFR 51.905(a)(3)(iii) and (4)(ii), the maintenance plan must include contingency provisions to correct any NAAQS violation that occurs after redesignation of an area. EPA guidance⁴ on this subject calls for contingency measures in the SIP, along with a schedule and procedure for adoption and implementation, that can be implemented in a timely fashion once they are triggered. The schedule should be as expeditious as practicable, but no longer than 24 months. The state should also identify specific indicators, or triggers, for setting the contingency plan into action. Possible triggers would be a monitored exceedance of the 8-hour ozone standard or an exceedance of a precursor emission level on which maintenance is based.

Despite New Hampshire's best efforts to maintain compliance with air quality standards, the possibility exists that ambient ozone concentrations might at some future date exceed the NAAQS. Therefore, in accordance with the requirements of Section 175A(d), New Hampshire has identified various contingency measures that could be taken following an ozone "trigger" event and is committed to pursuing the following protocol:

1. At the conclusion of each ozone season, NHDES will evaluate whether the 8-hour ozone design value for any ozone monitor in the planning area is above or below the 1997 8-hour ozone standard (the "trigger"). The design value, in the case of this standard, is defined as the average of the annual 4th highest daily maximum 8-hour average concentration for the preceding 3-year period.
2. If the design value is above the standard for any ozone monitor, NHDES will investigate the cause and determine whether the exceedance is due to:
 - a. an increase in emissions from local, in-state sources;
 - b. an increase in emissions from upwind, out-of-state sources; or
 - c. exceptional event as defined in 40 CFR 50.1.
3. If an increase in in-state emissions is determined to be a contributing factor to the exceedance, NHDES will evaluate the projected in-state emissions for the next ozone season. If the projected in-state emissions are not expected to decrease enough in the next ozone season to mitigate the violation, New Hampshire will implement one or more of the contingency measures listed below or will substitute other VOC or NOx control measures as necessary to achieve additional in-state emission reductions.
4. The contingency measures(s) will be selected by the Governor or the Governor's designee within six months of the end of the ozone season for which contingency measures have been determined to be needed. New Hampshire will then initiate a course of action to implement enforceable control measure(s) to rectify the problem. New rulemaking can typically be adopted and implemented within a 12-month timeframe. NHDES will update the maintenance plan as necessary and develop and implement required regulations as soon as practicable within the guidelines established in the New Hampshire Administrative Procedures Act, but no later than 18 months after selection of the appropriate measure.

New Hampshire is studying an array of possible contingency measures that would achieve further reductions in NOx and VOC emissions, including the following emission controls previously proposed by the Northeast states:

⁴ See reference in footnote 1.

- **NO_x** controls for **industrial, commercial, and institutional (ICI) boilers**;
- **VOC** controls for **emulsified and cutback asphalt paving**; and
- **VOC** controls for **consumer products**.

These contingency measures are among several OTC control measures⁵ exceeding current on-the-books/on-the-way (OTB/OTW) emission controls and serving as a subset of potential additional controls measures called beyond-on-the-way (BOTW). Details on BOTW control measures may be found in MACTEC's report "Development of Emission Projections for 2009, 2012 and 2018 for NonEGU Point, Area and Nonroad Source in the MANE-VU Region," Final Report, February 2007. Estimated emission reductions for New Hampshire from the three named control measures are given in Table 4-1.

Table 4-1. Estimated Emission Reductions from Three BOTW Control Measures

Control Measure	Pollutant	2009 Estimated Emission Reductions (tons per day)
ICI Boilers (OTC 2006 Model Rule)	NO _x	1.9
Emulsified Asphalt Paving (OTC guidelines)	VOC	4.4
Consumer Products (OTC 2006 Model Rule)	VOC	0.3

Source: MACTEC, 2007

These potential contingency measures are further described in subparts 4.1 through 4.3, below.

4.1 ICI Boilers (at Major Point Sources)

In 2006, the OTC commissioners recommended that the OTC member states pursue "as necessary and appropriate" state-specific rulemakings to establish required emission reduction percentages, emission rate performance standards, or control technologies to reduce emissions from industrial, commercial, and institutional boilers (OTC Resolution 06-02). The approximately 2-ton-per-day reduction in NO_x emissions from ICI boilers reported in Table 4-1 was based on implementation of OTC's recommended control levels on boilers of 25-250 MMBtu/hr heat input capacity at major point sources in New Hampshire.

4.2 Emulsified Asphalt Paving

NHDES is currently evaluating the proposed contingency measure for emulsified asphalt paving. OTC's guideline would limit the VOC content of emulsified asphalt to 2 percent or less. The VOC content of emulsified asphalt in New Hampshire is assumed to be 2.5 percent at present. Thus, the estimated VOC emission reduction from this source category would be approximately 20 percent during the ozone season.

4.3 Consumer Products

The contingency measure for consumer products included in Table 4-1 would replace the OTC 2001 VOC model rules with the OTC 2006 model rules, which provide amendments (adopted by

⁵ MACTEC Federal Programs, "Identification and Evaluation of Candidate Control Measures," Final Technical Support Document, Ozone Transport Commission, February 28, 2007.

the California Air Resources Board (CARB) in July 2005. The amendments revise the existing VOC limit for contact adhesives and create VOC limits for nine new source categories (adhesive removers, electrical cleaner, electronic cleaner, fabric refresher, footwear or leather care, graffiti remover, hairstyling products, toilet care, and wood cleaner). Based on estimates developed by CARB for 2009, these amendments would reduce VOC emissions by about 2 percent.

4.4 Additional Controls on Boilers

New Hampshire and the other OTC states have continued to investigate the possibility of additional controls on ICI boilers and utility boilers as stationary sources with the highest potential for NOx emission reductions. The additional controls would cover a wider range of boilers and would be more stringent than those described in the MACTEC report for non-EGU point sources and area sources in New Hampshire. More specifically, recent OTC proposals being considered by NHDES would provide additional NOx controls on the following boiler categories:

- Oil- and gas-fired boilers serving EGUs (OTC 2010 Model Rule): This proposed rule would impose the following NOx emission limitations on oil- and gas-fired utility boilers with a nameplate capacity of 25 MW or greater: for gas only, 0.08 lb/MMBtu; for oil or oil/gas, 0.15 lb/MMBtu.
- New small natural-gas-fired boilers and water heaters (OTC 2010 Model Rule): This proposed rule would establish NOx emission standards for various devices ranging in size from 75,000 to 5,000,000 Btu/hr.
- ICI boilers: Stricter NOx emission standards would be extended to any ICI boiler above a certain size threshold, e.g., 25 MMBtu/hr.

Since 2006, OTC and the Lake Michigan Air Directors Consortium (LADCO) have worked collaboratively to assess the technical and economic feasibility of enhanced emission controls on ICI boilers of all sizes.⁶ A NESCAUM study⁷ from the same time period examined a variety of technologies available to reduce NOx emissions from ICI boilers with heat input ratings from as low as 10 MMBtu/hr to as high as 1,000 MMBtu/hr. It was determined that emission reductions of 5 to 90 percent are achievable, depending on boiler size, fuel type, and chosen technology. Generally, the higher control efficiencies are applicable to larger ICI boilers, of which New Hampshire has relatively few.

NHDES is gathering data on New Hampshire's current stock of ICI boilers by size, fuel type, and existing control level. Preliminary data indicate that approximately 80 percent of ICI boilers in the state have heat input ratings less than 25 MMBtu/hr and lack NOx controls. Another 13 percent have heat input ratings less than 50 MMBtu/hr and lack NOx controls. These units – most of them burning fuel oil – account for more than half of all NOx emissions from ICI boilers in the state. Boilers with heat input ratings above 100 MMBtu/hr, while far fewer in number, would generally have some existing level of NOx controls. Given all of these facts, NHDES anticipates that any reasonable control program for ICI boilers in New Hampshire would be capable of reducing overall NOx emissions from this sector by 25 percent or more.

⁶ OTC and LADCO, "Evaluation of Control Options for Industrial, Commercial and Institutional (ICI) Boilers," Technical Support Document, Final, May 14, 2010.

⁷ NESCAUM, *Applicability and Feasibility of NOx, SO₂, and PM Emission Control Technologies for Industrial, Commercial, and Institutional (ICI) Boilers*, November 2008.

Ongoing state and regional initiatives to control boiler emissions are overlain by EPA's proposed or final rules pertaining to National Emission Standards for Hazardous Air Pollutants (NESHAP) for industrial, commercial, and institutional (ICI) boilers at major sources and area sources; NESHAP for coal- and oil-fired electrical generating units; and New Source Performance Standards (NSPS) for fossil-fuel-fired electric utility and ICI boilers. Under these rules, affected sources would be subject to mandatory new emission limits and/or periodic boiler tune-ups that would yield direct emission reductions or indirect co-benefits with respect to NO_x and VOC control.

4.5 Other Contingency Measures

NHDES is evaluating other potential NO_x and VOC control measures that could be applied, if necessary, to further reduce ozone levels in the maintenance area. These control measures are listed in Table 4-2 along with the previously mentioned contingency measures for boilers, asphalt paving, and consumer products.

Table 4-2. Potential Contingency Measures for Reducing Ozone Levels

Control Measure	Source Category
NO_x Control Measures	
Oil and Gas Boilers Serving EGUs (OTC 2010 Model Rule)	Major Point
New Small Natural-Gas-Fired Boilers and Water Heaters (OTC 2010 Model Rule)	Area*
ICI Boilers	Area or Major Point
Stationary Generators (OTC 2010 Model Rule)	Area
Motor Vehicle Anti-Idling (mandatory, not voluntary)	Onroad Mobile
California Low-Emission Vehicles (CALEV) Standards	Onroad Mobile
Low-Carbon Fuel Standard (regional)	Onroad Mobile / Nonroad
VOC Control Measures	
Large above-Ground Storage Tanks (OTC 2010 Model Rule)	Major Point
Emulsified and Cutback Asphalt Paving (OTC guidelines)	Area
Adhesives and Sealants Application (OTC 2006 Model Rule)	Area
Architectural and Industrial Maintenance Coatings (OTC 2009 Model Rule)	Area
Solvent Cleaning (OTC 2009 Model Rule)	Area
Consumer Products (OTC 2006 Model Rule)	Area
Consumer Products (OTC 2010 Model Rule)	Area
Motor Vehicle and Mobile Equipment Non-Assembly Line Coatings Operations (OTC 2009 Model Rule)	Area
Stage II Vapor Recovery**	Area

*Area sources include minor emission sources, typically large in number and widely distributed.

** Stage II Vapor Recovery would serve as a contingency measure upon determination of widespread use of ORVR.

5. VERIFICATION OF CONTINUED ATTAINMENT

EPA guidance calls upon the state to show how it will track the progress of the maintenance plan, i.e., demonstrate that compliance with the 8-hour ozone standard is being maintained during the 10-year planning period. Tracking is necessary because the emission projections that form the basis of the maintenance demonstration depend on assumptions of point and area source growth and implementation of specific emission control measures. One option for tracking maintenance is to make periodic updates to the emissions inventory projections. Such an update could be based, in part, on the annual update of EPA's national emissions inventory (NEI) database and could indicate new source growth and other changes from the attainment inventory (such as changes in vehicle miles traveled or in traffic patterns).

New Hampshire will track the maintenance of attainment by analyzing air quality trends at local monitors and annually updating the state's emissions inventories. NHDES routinely reviews air quality monitoring data and keeps charts showing trends in air quality at individual monitor sites. As required by law, New Hampshire produces comprehensive emissions inventories on a three-year cycle. The latest one, the 2008 inventory, will be completed this year, to be followed by formal inventories for 2011 and 2014. For the off-years, New Hampshire revises the inventories annually using updated emissions data for the largest sources.

6. ADMINISTRATIVE DOCUMENTS

In accordance with the requirements for SIP submissions established in 40 CFR 51.103, the following documentation is herewith provided as integral to this maintenance plan:

- A formal letter of submittal from the Governor or his designee, requesting EPA approval of this SIP revision;
- Evidence that the NHDES has the necessary legal authority under state law to adopt and implement the plan.
- Evidence that public notice was given of the proposed change consistent with procedures approved by EPA, including the date of publication of such notice.
- Certification that public hearing(s) were held in accordance with the information provided in the public notice and the state's laws and constitution, if applicable and consistent with the public hearing requirements in 40 CFR 51.102.
- Compilation of public comments and the state's response thereto.

Documentation of legal authority, public notice, certification of the public process, and public comments and responses are provided in Attachment B.

7. SUMMARY

The State of New Hampshire is committed to achieving and maintaining air quality standards for ground-level ozone and its chemical precursors. The entire maintenance planning area is currently in attainment of the 1997 8-hour ozone NAAQS of 0.08 parts per million and is projected to stay in attainment for the duration of the 10-year planning period that ends on June 15, 2014.

With this SIP revision, New Hampshire has met all Section 110(a)(1) maintenance plan requirements. The maintenance plan provides for continued compliance with the 8-hour ozone NAAQS in all areas that were classified as nonattainment areas for the former 1-hour ozone standard, as evidenced by the following plan elements:

1. *Attainment Inventory.* New Hampshire compiled and used a 2002 baseline inventory of NO_x and VOC emissions in accordance with EPA's Consolidated Emissions Reporting Rule.
2. *Maintenance Demonstration.* New Hampshire prepared 2012 and 2014 projected inventories of NO_x and VOC emissions for comparison with the 2002 baseline inventory. These inventories indicate a sustained downward trend in NO_x and VOC emissions within the maintenance planning area, demonstrating that the 1997 8-hour ozone standard will be maintained through at least 2014. The downward trend in NO_x and VOC emissions is reinforced by ozone monitoring data, which show a similar, steady downward trend. (Note: New Hampshire recently prepared a 2008 Periodic Emissions Inventory as required by the Clean Air Act. This inventory has been submitted electronically to EPA for inclusion in the 2008 National Emissions Inventory. It is also being submitted to EPA for SIP approval along with New Hampshire's redesignation request for the 1997 8-hour ozone nonattainment area. The 2008 inventory, although not directly related to the maintenance plan, is consistent with the stated trend in NO_x and VOC emissions.)
3. *Ambient Air Quality Monitoring.* New Hampshire is committed to the continued operation of an effective air quality monitoring network to verify maintenance of the planning area's attainment status.
4. *Contingency Plan.* New Hampshire has developed a contingency plan to ensure that any violations of the 8-hour ozone NAAQS, should they occur, are addressed and promptly corrected.
5. *Verification of Continued Attainment.* New Hampshire is committed to tracking the maintenance of attainment at least annually – a frequency that would enable the implementation of contingency measures within a short timeframe, should such measures become necessary. Verification will be based on analysis of air quality trends and changes in emissions inventories.

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ATTACHMENT A

**2002 Attainment Inventory and
2012 and 2014 Projected Inventories**

(Files available on accompanying CD.)

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ATTACHMENT B

Administrative Documents:

- **Evidence of Legal Authority**
- **Certification of Public Process**
- **Copy of Public Notice**
- **Public Comments and State's Response**

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TITLE X

PUBLIC HEALTH

CHAPTER 125-C

AIR POLLUTION CONTROL

Section 125-C:4

125-C:4 Rulemaking Authority; Subpoena Power. –

- I. The commissioner shall adopt rules under RSA 541-A, relative to:
- (a) The prevention, control, abatement, and limitation of air pollution, including, but not limited to, open air source pollution, mobile source pollution, and stationary source pollution.
 - (b) Primary and secondary ambient air quality standards.
 - (c) Procedures to meet air pollution emergencies, as authorized by RSA 125-C:9.
 - (d) The establishment and operation of a statewide permit system, as authorized by RSA 125-C:6, XIV, RSA 125-C:11, I and RSA 125-C:11, I-a.
 - (e) Devices, in addition to those devices defined under RSA 125-C:2, subject to the permit requirements of RSA 125-C:11, as authorized by RSA 125-C:11, II.
 - (f) The exemption of certain devices and non-Title V sources from the permit requirements of RSA 125-C:11, I and the conformance of exempted devices to established standards, as authorized by RSA 125-C:11, I.
 - (g) The forms and information required on applications for temporary and permanent permits required under RSA 125-C:11, as authorized by RSA 125-C:12, I.
 - (h) Notification of and public hearing on permit applications, including exemptions from those requirements, as authorized by RSA 125-C:12, II.
 - (i) Fees for permit application and review, as authorized by RSA 125-C:12, IV.
 - (j) Procedures for permit application review, as authorized by RSA 125-C:11, IV, and criteria for permit denial, suspension or revocation, as authorized by RSA 125-C:13.
 - (k) Procedures for air testing and monitoring and recordkeeping, as authorized by RSA 125-C:6, XI.
 - (l) Procedures for receiving violation complaints and for rules enforcement, as authorized by RSA 125-C:15, I.
 - (m) Procedures for granting variances, as authorized by RSA 125-C:16.
 - (n) The manufacture, use, or sale of consumer products for purposes of implementing RSA 485:16-c.
 - (o) Applicability thresholds for emissions of particulate matter, mercury, and dioxin as provided in RSA 125-C:10-b, VII(f).
 - (p) The duration of time during which no additional best available control technology determination is required as provided in RSA 125-C:10-b, IV and VI.
 - (q) Procedures for establishing standards for and certification of any material, that is not an exempt fuel, to be combusted in a device at an affected source subject to RSA 125-C:10-b.
 - (r) Standards and testing requirements for biomass and eligible biomass fuel as authorized by RSA 125-C:6, XIV-a.
- I-a. In adopting rules under paragraph I, the department may incorporate by reference standards issued by the California air resources board relative to certification and testing of vapor recovery equipment.
- I-b. In adopting rules under subparagraph I(n), the department may incorporate by reference other state test methods and procedures that are referenced in the model rules of the Ozone Transport Commission (OTC) concerning consumer products, as defined in RSA 125-C:2, V-c.
- II. The commissioner is authorized to issue subpoenas requiring the attendance of such witnesses and the production of such evidence and to administer such oaths and to take such testimony as he may deem necessary.

Source. 1979, 359:2. 1986, 202:8. 1996, 228:19, 104; 278:2, 3. 2001, 293:5. 2003, 137:3. 2004, 175:2, eff. May 27, 2004. 2005, 173:3, eff. June 29, 2005. 2008, 113:3, eff. Aug. 2, 2008.

TITLE X PUBLIC HEALTH

CHAPTER 125-C AIR POLLUTION CONTROL

Section 125-C:6

125-C:6 Powers and Duties of the Commissioner. -- In addition to the other powers and duties granted herein, the commissioner shall have and may exercise the following powers and duties:

I. Exercising general supervision of the administration and enforcement of this chapter and all rules adopted and orders promulgated under it;

II. Developing a comprehensive program and provide services for the study, prevention, and abatement of air pollution;

III. Conducting and encouraging studies relating to air quality;

IV. Collecting and disseminating the results of studies relating to air quality;

V. Advising, consulting, and cooperating with the cities and towns and other agencies of the state, federal government, interstate agencies, and other affected agencies or groups in matters relating to air quality;

VI. Encouraging local units to promote cooperation by the people, political subdivisions, industries, and others in preventing and controlling air pollution in the state;

VI-a. Encouraging the recycling of waste oil by allowing qualified marketers to sell, and qualified facilities to burn, a mixture that consists of at least 90 percent virgin no. 6 oil and the remainder complying with the used fuel oil specifications in 40 CFR, section 279.11, table 1;

VII. Entering at all reasonable times in or upon any private or public property, except private residences, for the purpose of inspecting or investigating any condition which is believed to be either an air pollution source or in violation of any of the rules or orders promulgated hereunder. Any information, other than emission data, relating to secret processes or methods of manufacture or production obtained in the course of such inspection or investigation shall not be disclosed by the commissioner without permission of the person whose source is inspected or investigated;

VIII. Accepting, receiving, and administering grants or other funds or gifts for the purpose of carrying out any of the functions of this chapter, including such monies given under any federal law to the state for air quality control activities, surveys, or programs;

IX. Consulting the air resources council established by RSA 21-O:11 on the policies and plans for the control and prevention of air pollution;

X. Exercising all incidental powers necessary to carry out the purposes of this chapter;

XI. Conducting emission tests and requiring owners or operators of stationary sources to install, maintain, and use emission monitoring devices and to make periodic reports to the commissioner on the nature and amounts of emissions from such stationary sources. The commissioner shall have the authority to make such data available to the public and as correlated with any applicable emission standards;

XII. Carrying out a program of inspection and testing of all modes of transportation, to enforce compliance with applicable emission standards when necessary and practicable and to control or limit the operation of motor vehicular and other modes of transportation when in the opinion of the commissioner such modes of transportation are producing or pose an imminent danger of producing levels of air pollutants that will result in a violation of an ambient air quality standard, or that will result in a significant deterioration, as defined in applicable federal regulations, of existing air quality in an area classified as a "clean air" area by state or federal regulations;

XIII. Coordinating and regulating the air pollution control programs of political subdivisions of the state and entering agreements with said subdivisions to plan or implement programs for the control and abatement of air pollution;

XIV. Establishing and operating a statewide system under which permits shall be required for the construction, installation, operation or material modification of air pollution devices and sources, which system shall be established pursuant to RSA 125-C:11 and the sections which follow. The authority vested in the commissioner by this section shall include the power to delay or prevent any construction, modification or operation of said air pollution sources and modifications which, in the opinion of the commissioner, would cause the ambient air pollution level in the locality of such construction, modification or operation to exceed limits for ambient

concentrations established by the New Hampshire state implementation plan adopted pursuant to the Clean Air Act as amended, or which construction, modification or operation would, in the opinion of the commissioner, violate any provision of any land use plan established by the New Hampshire state implementation plan;

XIV-a. Establishing fuel quality standards and testing requirements for biomass other than round wood and wood chips derived from round wood or waste wood such as limbs, branches, brush, slash, bark, stumps, sawdust, saw mill trimmings, clean pallets, and untreated wood scraps from furniture and other manufacture and eligible biomass fuel related to the combustion of such materials at stationary sources. The commissioner may establish such standards as necessary to maintain statewide compliance with Clean Air Act standards and RSA 125-I.

XV. Implementing a program of prevention of significant deterioration of ambient air quality by establishing air quality increments limiting the maximum allowable increases in the amounts of air pollutants provided such increments are not less stringent than those specified in the Clean Air Act and amendments thereto, and in regulations promulgated thereunder;

XVI. Establishing an air quality monitoring equipment replacement program to provide for sufficient annual replacement to meet federal Environmental Protection Agency guidelines and to assure the reliability and accuracy of the network equipment.

XVII. Implementing a program to control the emissions of air contaminants from consumer products for purposes of RSA 485:16-c, by establishing limits on the manufacture, use, or sale of such products, provided that such limits are not less stringent than those established under the Clean Air Act and amendments thereto, and in regulations promulgated under the Clean Air Act.

Source. 1979, 359:2. 1981, 332:3. 1986, 202:6, I(h), 8, 10. 1988, 277:1. 1995, 192:1. 1996, 228:104. 2001, 293:6, eff. July 17, 2001. 2008, 113:4, eff. Aug. 2, 2008.

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JOHN H. LYNCH
Governor

State of New Hampshire

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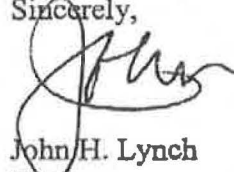
May 25, 2006

Robert W. Varney, Regional Administrator
U.S. EPA Region I
Suite 1100 (RAA)
1 Congress Street
Boston, MA 02114-2023

Dear Mr. Varney:

I have designated Robert R. Scott, Director of the New Hampshire Air Resources Division, as the official having the authority to request the U.S. Environmental Protection Agency approval of all New Hampshire State Implementation Plan revisions. Mr. Scott replaces Mr. Kenneth Colburn who previously held this authority.

Sincerely,



John H. Lynch
Governor

cc: Michael P. Nolin, NHDES Commissioner
Robert R. Scott, NHDES ARD Director ✓

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The State of New Hampshire
Department of Environmental Services

Thomas S. Burack, Commissioner

*Celebrating 25 years of protecting
New Hampshire's environment.*



CERTIFICATION OF PUBLIC PROCESS:
**Maintenance Plan for Former 1-Hour Ozone Nonattainment Areas in
Cheshire, Hillsborough, Merrimack, Rockingham, and Strafford Counties**

I hereby certify that:

In accordance with New Hampshire Administrative Rule Env-A 204.01(b) and Federal regulations at 40 CFR § 51.102, public notice was given that the New Hampshire Department of Environmental Services (the Department) intended to submit for the approval of the U.S. Environmental Protection Agency (EPA) a revision of the New Hampshire State Implementation Plan (SIP) in the form of a maintenance plan for areas in Cheshire, Hillsborough, Merrimack, Rockingham, and Strafford Counties that were designated as nonattainment areas for the former national ambient air quality standard for 1-hour ozone but subsequently designated as classified/attainment areas for the 1997 standard for 8-hour ozone.

A public hearing on the SIP revision was held at 10:35 a.m., Tuesday, January 24, 2012, at the Department's offices in Rooms 110 and 111 at 29 Hazen Drive, Concord, NH 03301. Opportunity was provided for members of the public to submit oral comments during the hearing or written comments at any time up to 4:00 p.m. on the hearing date, for consideration by the Department in preparing the final SIP revision.

A copy of the draft SIP revision was available for public inspection at the Department's offices at 29 Hazen Drive, Concord, NH, during regular working hours from 8:00 a.m. to 4:00 p.m., Monday through Friday, throughout the comment period. The draft SIP revision was also available for downloading from the Department's website at <http://des.nh.gov>.

The notice was published in the *Union Leader*, a newspaper of general, statewide circulation, on Friday, December 23, 2011, more than 30 days prior to the date of the hearing.

A complete record of the public hearing is available on tape at the offices of the New Hampshire Department of Environmental Services, 29 Hazen Drive, Concord, NH.

The above statements are true to the best of my knowledge and belief.

Robert R. Scott
Director, Air Resources Division

21 Feb 12
Date

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STATE OF NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES AIR RESOURCES DIVISION CONCORD, NEW HAMPSHIRE NOTICE OF PUBLIC COMMENT PERIOD AND PUBLIC HEARINGS In accordance with New Hampshire Administrative Rule Env-A 204.01(b) and Title 40 of the Code of Federal Regulations (CFR) Section 51.102, notice is hereby given that the New Hampshire Department of Environmental Services, Air Resources Division (the Department) has prepared, and intends to submit to the U.S. Environmental Protection Agency (EPA) for approval, a request for redesignation of the Boston-Manchester-Portsmouth (SE), New Hampshire 8-hour ozone (1997 standard) nonattainment area, including a maintenance plan for that area, hereinafter referred to as "Request for Redesignation (including MP I)," pursuant to section 110(a) of the federal Clean Air Act. This request, if approved by EPA, will revise New Hampshire's State Implementation Plan (SIP). In addition, the Department has prepared and intends to submit to EPA for approval as a SIP revision a maintenance plan, hereinafter referred to as "MP II," for the area of the state that was formerly designated nonattainment for the 1-hour ozone standard, but which was classified as unclassifiable/attainment for the 8-hour ozone standard. The Boston-Manchester-Portsmouth (SE), New Hampshire 8-hour ozone (1997 standard) nonattainment area consists of 52 cities and towns in the southern and/or eastern parts of Hillsborough, Merrimack, Rockingham, and Strafford Counties. Ground-level ozone monitoring data for the most recent 3-year monitoring period of 2008-2010 show that air quality in the nonattainment area has met the 1997 National Ambient Air Quality Standard for 8-hour ozone. For EPA to approve the Request for Redesignation, the Department must submit maintenance plan MP I as part of this request, detailing how the state will insure that the area will not fall back into nonattainment once it is redesignated as attainment. MP I must demonstrate that the area will remain in compliance for a period of 10 years from the date of redesignation. The former nonattainment area for the 1-hour ozone standard that was classified as unclassifiable/attainment for the 8-hour ozone standard on June 15, 2004, consists of 79 cities and towns in Cheshire County and the northern and/or western parts of Hillsborough, Merrimack, Rockingham, and Strafford Counties. The maintenance plan for this area, MP II, must demonstrate that the area will remain in compliance with the 8-hour ozone standard for the 10-year period from June 15, 2004 to June 15, 2014. The Department hereby solicits comments and has scheduled public hearings on the Request for Redesignation (including MP I) and MP II. A public hearing on the Request for Redesignation (including MP I) has been scheduled for 10:30 a.m., Tuesday, January 24, 2012, at the Department offices in Rooms 110 and 111 at 29 Hazen Drive, Concord, NH 03301. A public hearing on MP II has been scheduled to start at the conclusion of the first hearing. Comments may be presented orally and/or in writing at the public hearings. Written comments may also be submitted by postal delivery, email, or fax to Charles Martone, Air Resources Division, NH Department of Environmental Services, P.O. Box 95, Concord, NH 03302-0095; email Charles.Martone@des.nh.gov; fax (603)271-1381. Please specify which plan each comment addresses. All written comments on the Request for Redesignation (including MP I) and all written comments on MP II must be received by 4:00 p.m. on Tuesday, January 24, 2012, to be entered into the record. The Request for Redesignation (including MP I) and MP II are available for public inspection at the Department's offices at 29 Hazen Drive, Concord, NH, during regular working hours from 8:00 a.m. to 4:00 p.m., Monday through Friday. The main text of both documents may be downloaded from the Department's website at <http://des.nh.gov/>. Questions regarding the Request for Redesignation (including MP I) and MP II may be directed to Charles Martone at (603) 271- 1089. Robert R. Scott Director, Air Resources Division NH Department of Environmental Services Dated: December 23, 2011

Appeared in: **The Union Leader** on Friday, 12/23/2011

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**Responses to Comments on
New Hampshire's Proposed Maintenance Plan for
Former 1-Hour Ozone Nonattainment Areas in Cheshire, Hillsborough,
Merrimack, Rockingham, and Strafford Counties**

On January 24, 2012, the New Hampshire Department of Environmental Services (NHDES) received comments from the U.S. Environmental Protection Agency (EPA) on New Hampshire's proposed Section 110(a)(1) maintenance plan for former 1-hour ozone nonattainment areas in Cheshire, Hillsborough, Merrimack, Rockingham, and Strafford Counties. No other comments were received. The following are NHDES's responses to EPA's comments. **Comments are written in regular font and responses are written in *italics*.**

1. On page 6, the citation "(40 FR 72574)" should be "(67 FR 72574)."

Response: The citation has been corrected.

2. On page 6, the citation "(40 FR 59338)" should be "(70 FR 59338)."

Response: As above.

Ozone Data

3. On page 12, Table 3-1 should identify that the ozone concentrations are presented in units of parts per billion (ppb).

Response: The requested clarification has been added.

4. On page 12, in Table 3-1, the 2012 threshold values should be as follows:

Keene	129 ppb
Peterborough	116 ppb
Nashua	123 ppb
Concord	123 ppb
Portsmouth	125 ppb
Rye	123 ppb

Therefore, NH DES should adjust the "most recent year at or above the threshold" column correspondingly. In addition, it should be noted that in the current version of the table, it appears that 1-hour values, rather than 8-hour values, were used when determining the most recent year at or above the threshold.

Response: The 2012 threshold values and the most recent years at or above threshold have been corrected in the table.

Motor Vehicle Emission Estimates

5. The CD files submitted to EPA for review only included the MOVES2010 input and output files associated with the redesignation request. The final submittal of the Section 110(a)(1) maintenance plan should also include the MOVES2010 files associated with this plan.

Response: Preliminary MOVES input/output files for the maintenance plan were mailed on a CD-ROM to Ariel Garcia, EPA, as requested in a phone call to Felice Janelle, NHDES. A complete data CD-ROM, including MOVES input/output files and supporting files for the 2002, 2012, and 2014 emissions inventories, is being provided in association with this Section 110(a)(1) maintenance plan submittal.

2002 Inventory and Projections to 2012 and 2014

6. Page 11 of the proposed maintenance plan for attainment areas in the 5-county, former 1-hour ozone nonattainment areas indicates that,

“There has been a decline in actual point source VOC emissions since 2002, which is partially attributable to the closure of two relatively large VOC-emitting sources (Batesville Manufacturing, Inc., and Venture Holdings). However, because NHDES has retained the emission reduction credits from these facility closures for possible future use, these emission reductions are not included in the 2012 and 2014 inventories.”

EPA suggests that NH DES clarify that although these facilities have been closed, their emissions have been retained in the 2012 and 2014 inventories.

Response: The emissions reductions from the closings of Batesville Manufacturing and Venture Holdings were retained in the 2012 and 2014 inventories. The relevant wording in Section 2.3 of the maintenance plan has been revised to clarify this fact.

7. New Hampshire selected its 2002 emissions inventory to use as the base year inventory for the maintenance plan developed to support redesignation of former 1-hour nonattainment areas in the state. The 2002 inventory was submitted to EPA on June 7, 2007. New Hampshire's final maintenance plan submittal for this area should include a reference to the 2002 inventory submittal, as EPA will need to approve the 2002 inventory into the SIP.

Response: The second paragraph of Section 2.1 of the maintenance plan has been revised to provide specific reference to the 2002 emissions inventory previously submitted to EPA.

8. It is evident that New Hampshire intends to use full county inventories for the maintenance plan for the 5 county former 1-hour nonattainment areas. This should be clearly stated in the final maintenance plan submittal, particularly since the maintenance plan developed for New Hampshire's 8-hour nonattainment area was not prepared using full counties, but rather, is based on the town by town geography of that area.

Response: Full county inventories were used as a reasonable proxy for the irregularly-shaped geographic region that comprises the planning area for the maintenance plan. Wording in Section 2 of the maintenance plan has been edited to explain and clarify this fact.

9. The inventory estimates contained in the 2002 inventory are summarized in several different geographic arrangements. The closest summary that corresponds to the 5-county area that is the subject of this maintenance plan is the summary for the "1-hour 4-county area". The four counties included in this summation are Hillsborough, Merrimack, Rockingham, and Strafford. By adding in emissions for Cheshire County, the inventory for the 5-county area that is the subject of the one-hour redesignation request can be obtained. Table 1 below illustrates this exercise for VOC emissions using the 2002 emissions inventory, and then compares that sum to the emission estimates shown within Table 2-1 of the state's proposed maintenance plan for this area. Table 2 illustrates this comparison for NO_x emissions.

Table 1: Comparison of 2002 VOC emissions for the 5 County area (lbs/day)

Source Category	4 County Area	Cheshire County	5 Counties from Inventory (4 County area + Cheshire)	5 County Total From proposed Maintenance plan
Point	15,700	198	15,898	15,898
Onroad	68,286	6,387	74,673	87,161
Area + Nonroad	147,648	17,870	165,518	162,001
Total	231,634	24,455	256,089	265,060

Table 2: Comparison of 2002 NO_x emissions for the 5 County area (lbs/day)

Source Category	4 County Area	Cheshire County	5 County Total From 2002 Inventory	5 County Total From proposed Maintenance plan
Point	66,760	587	67,347	67,347
Onroad	134,647	9,652	144,299	261,303
Area + Nonroad	79,350	6,310	85,660	60,303
Total	280,757	16,549	297,306	388,953

The reasons for the differences in the 5 county total emission estimates should be identified and corrected.

Response: *The reasons for the differences in the 5 county total emissions between the 2002 inventory and the proposed maintenance plan are as follows:*

- *The on-road mobile emissions estimates for the maintenance plan were calculated with MOVES, which was not available at the time that the 2002 Periodic Emissions Inventory was prepared. On-road mobile emissions estimates for the 2002 Periodic Emissions Inventory were calculated using MOBILE6.2 emission factors.*
- *Similarly, Stage II vehicle refueling emissions estimates (SCC 25-01-060-100) for the maintenance plan were calculated with MOVES and were included and reported in the on-road mobile category. Stage II emissions estimates for the 2002 Periodic Emissions Inventory were calculated using MOBILE6.2 emission factors, and they were reported in the area source category. Since this category is now calculated with MOVES and included under on-road mobile, the MOBILE6.2-based stage II refueling emissions estimates were removed from the area source inventory. This resulted in an adjustment to the 2002 maintenance plan area source inventory of -2,638 pounds per day of VOC when compared with the previously submitted 2002 Periodic Emissions Inventory.*

- *In compiling the 2002 figures for the maintenance plan, it was discovered that emissions estimates for the industrial wood combustion category (SCC 21-02-008-000) should not have been calculated and reported under the area source category. All industrial wood combustion in 2002 would have occurred at permitted point source facilities, and making an area source estimate for this category caused double-counting. Therefore, the area source estimate for industrial wood combustion was removed. This resulted in a correction to the 2002 maintenance plan area source inventory of -25,357 and -880 pounds per day of NOx and VOC respectively when compared with the previously submitted 2002 Periodic Emissions Inventory.*

This explanation has been added to Section 2.3 of the maintenance plan.

10. Section 2.2 of the proposed maintenance plan for the 5-county attainment area mentions that growth factors from the Economic Growth and Analysis System (EGAS) were used to project point and area source emissions to 2012 and 2014. The final submittal should include the specific point and area source growth factors that were used to make these projections.

Response: *All of the supporting technical files for the projected 2012 and 2014 emissions inventories relevant to the Section 110(a)(1) maintenance plan are being provided to EPA on CD-ROM. These files include the EGAS factors that were used to do the projections. Because final, quality-assured emissions data for calendar year 2011 are not yet available, NHDES used 2010 actual emissions data and the applicable growth factors to develop revised point source emissions estimates for the 2012 and 2014 inventories. Table 2-1 of the maintenance plan has been revised accordingly.*

Contingency Measures

11. On page 13 in Section 4, NH DES cites one reason to investigate an ozone season exceedance as “an anomaly in the ozone-season meteorology”. Since weather anomalies alone do not exempt NH DES from contingency measures, EPA recommends replacing this bullet with reference to “exceptional events,” as shown below:

“2. If the design value is above the standard/or any ozone monitor, NHDES will investigate the cause and determine whether the exceedance is due to:

- an increase in emissions from local, in-state sources;
- an increase in emissions from upwind, out-of-state sources; or
- ~~an anomaly in the ozone season meteorology~~ an exceptional event as defined in 40 CFR 50.1.”

Response: *The requested rewording has been made.*

12. On page 13, EPA recommends that NH DES delete the word “significant” from the third step for the protocol, as shown below, since all factors contributing to ozone exceedances should be evaluated:

“3. If an increase in in-state emissions is determined to be a ~~significant~~ contributing factor to the exceedance, NHDES will evaluate the projected in-state emissions for the next ozone season.”

Response: *The word “significant” has been removed.*

13. On page 13, the 4th step of the protocol states:

"The contingency measures(s) will be selected by the Governor or the Governor's designee within six months of the end of the ozone season for which contingency measures have been determined to be needed. New Hampshire will then initiate a course of action to implement enforceable control measures) to rectify the problem. New rulemaking, when required, can typically be adopted and implemented within a 12-month timeframe, assuming that no new legislation is required."

In the final submittal, NH DES should clarify the timeframe to implement contingency measures.

Response: *The end of the quoted paragraph has been revised to read as follows: "New rulemaking can typically be adopted and implemented within a 12-month timeframe. NHDES will update the maintenance plan as necessary and develop and implement required regulations as soon as practicable within the guidelines established in the New Hampshire Administrative Procedures Act, but no later than 18 months after selection of the appropriate measure."*

14. The following sentence from page 18 of the section 110(a) maintenance plan should either be corrected, or clarified:

"Note: New Hampshire previously prepared and submitted to EPA a 2008 periodic emissions inventory as required by the Clean Air Act."

It is not clear whether New Hampshire is referencing a periodic emissions inventory submittal and accompanying text write-up, such as the submittal New Hampshire made to EPA on June 7, 2007, of a 2002 periodic inventory, or whether this sentence is referring to New Hampshire's electronic data submittal to the EPA's national emissions inventory database of emission estimates for calendar year 2008.

Response: *New Hampshire was referencing the 2008 emissions inventory in a broad sense, as information that corroborates the observed downward trend in emissions. The broader 2008 emissions inventory includes the electronic data submittal that New Hampshire made to EPA for inclusion in the 2008 National Emissions Inventory as well as the 2008 inventory SIP submittal that New Hampshire is making in conjunction with the 8-hour ozone redesignation request. The sentence in question has been revised accordingly.*