

OUTDOOR WOOD BOILERS OPEN BURNING

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**NHDES Air Resources Division
Compliance Assessment Bureau**

**NH Dept. of Environmental Services
Air Resources Division**

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Outdoor Wood Boilers

WHAT WE WILL COVER

- × What is an Outdoor Wood Boiler?
- × Laws and Rules that Apply to Outdoor Wood Boilers
- × Statutory Interpretations
- × Impacts on Existing Units
- × Emissions and Labeling
- × Permitted Fuels
- × Municipal Authority
- × Case Studies
- × Questions

WE WILL NOT COVER ...

- ✘ Specific cases with which you may be currently dealing.

If you have an issue, call us at the office and we will address your concerns.

“OUTDOOR WOOD BOILERS”



ALSO KNOWN AS:

- ✘ Outdoor Wood-Fired Hydronic Heaters
- ✘ Outdoor Wood Furnaces



OWB LAW



- ✘ RSA 125-R went into effect August 10, 2008
- ✘ Amended July 1, 2017
- ✘ It applies to all units designed to heat water and be installed outside

You can't circumvent the law by installing in a building!



CHANGES TO RSA 125-R:

- ✘ Introduces an EPA Certification
 - + No longer a voluntary program

- ✘ Bans the Purchase, Sale, and Installation of Non-Certified OWBs.
 - + Only units that meet the Step 1 or Phase 2 emission standard of 0.32 lb/MMbtu heat output can be sold and installed in NH

EMISSION STANDARD AND LABELING:

Phase II: (white tag)

- 0.32 lb/MMbtu particulate emission limit
- 90% cleaner than “old” units

Step 1:

- + Same emission Std.
- + Specific label language



PHASE 2 QUALIFIED

U.S. Environmental Protection Agency
Wood-burning Fireplace Program

Phase 2 Qualified models are cleaner and pollute less than those models that have not met this emissions level. Exposure to smoke has been associated with respiratory illness and other health problems. Models that have lower smoke emissions may reduce your risk.

For more information go to www.epa.gov/burnwise

FIREPLACE SMOKE EMISSIONS RANGE

Lower Emissions 0 Higher Emissions 12.0
Better Worse

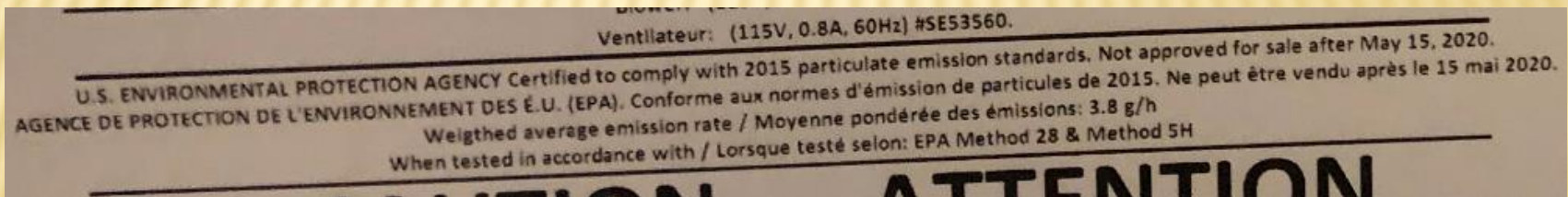
2.93 THIS MODEL 5.1 EPA PHASE 2 EMISSIONS LEVEL

Fireplaces with lower emissions produce less smoke when installed and operated properly.

MANUFACTURER: Earthcore Industries, LLC
MODEL NO: Standard Series 36C
PARTICLE EMISSIONS: 2.93 GRAMS/KG OF WOOD BURNED

For proper operation, catalyst must be replaced every 3 to 5 years.

* EPA has determined, based on testing by an accredited independent laboratory and a certification of conformity by a nationally recognized certification body, that this model qualifies at the Phase 2 emissions level for U.S. EPA's Voluntary Fireplace Program.



Ventilateur: (115V, 0.8A, 60Hz) #SE53560.

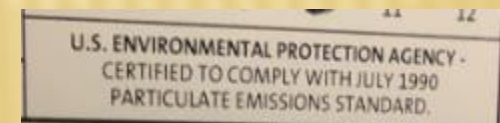
U.S. ENVIRONMENTAL PROTECTION AGENCY Certified to comply with 2015 particulate emission standards. Not approved for sale after May 15, 2020.

AGENCE DE PROTECTION DE L'ENVIRONNEMENT DES É.U. (EPA). Conforme aux normes d'émission de particules de 2015. Ne peut être vendu après le 15 mai 2020.

Weighted average emission rate / Moyenne pondérée des émissions: 3.8 g/h

When tested in accordance with / Lorsque testé selon: EPA Method 28 & Method 5H

ATTENTION



U.S. ENVIRONMENTAL PROTECTION AGENCY -
CERTIFIED TO COMPLY WITH JULY 1990
PARTICULATE EMISSIONS STANDARD.

THE LAW PERMITS SPECIFIC FUELS

- Clean wood (including pallets)
- Wood pellets made from clean wood
- Home heating oil/propane/natural gas which complies with fuel sulfur limits

MUNICIPAL AUTHORITY

Municipalities have the Authority to...

- + Prevent and Remove Nuisances
- + Adopt and Enforce More Stringent Ordinances

HOW DID THE LAW IMPACT EXISTING UNITS?

- ✘ Units installed prior to 8-10-08 are “Grandfathered” and outside DES jurisdiction
- ✘ If an existing unit is moved, DES considers this to be a NEW installation and subject to the law
- ✘ Loop-hole allowing **ANY** unit to be **installed** as long as set-backs and stack height requirements are met, has been closed

HOW DID THE LAW IMPACT EXISTING UNITS?

- RSA 147 states that if an OWB causes a nuisance or is injurious to public health, the local health officer may, in writing, order that the use of the OWB be discontinued.



HOW DID THE LAW IMPACT EXISTING UNITS?

- ✘ DHHS will Provide Assistance to Local Health Officers
- ✘ DES will provide technical assistance to DHHS and the municipality for the purpose of enforcing the nuisance provisions in RSA 147.



HOW TO DETERMINE IF AN EXISTING INSTALLATION IS LEGAL

Type	Set-Back	Stack Height
Non-Rated	200 ft. from nearest abutting residence	2 ft. higher than the peak of a roof of a residence or place of business located w/in 300 ft.
Phase 1	100 ft. from nearest abutting residence	2 ft. higher than the peak of a roof of a residence or place of business located w/in 300 ft.
Phase 2	50 ft. from the property line	None

CASE STUDY 1: QUEEN ST., BOSCAWEN

- ✘ Non-rated OWB
- ✘ Owner failed to consider a residence w/in 300 ft during installation when determining stack-height
- ✘ DES required owner to raise stack to 25 ft above ground level
- ✘ Inaccurate information from town officials

CASE STUDY 1: QUEEN ST., BOSCAWEN

Before:



CASE STUDY 1: QUEEN ST., BOSCAWEN

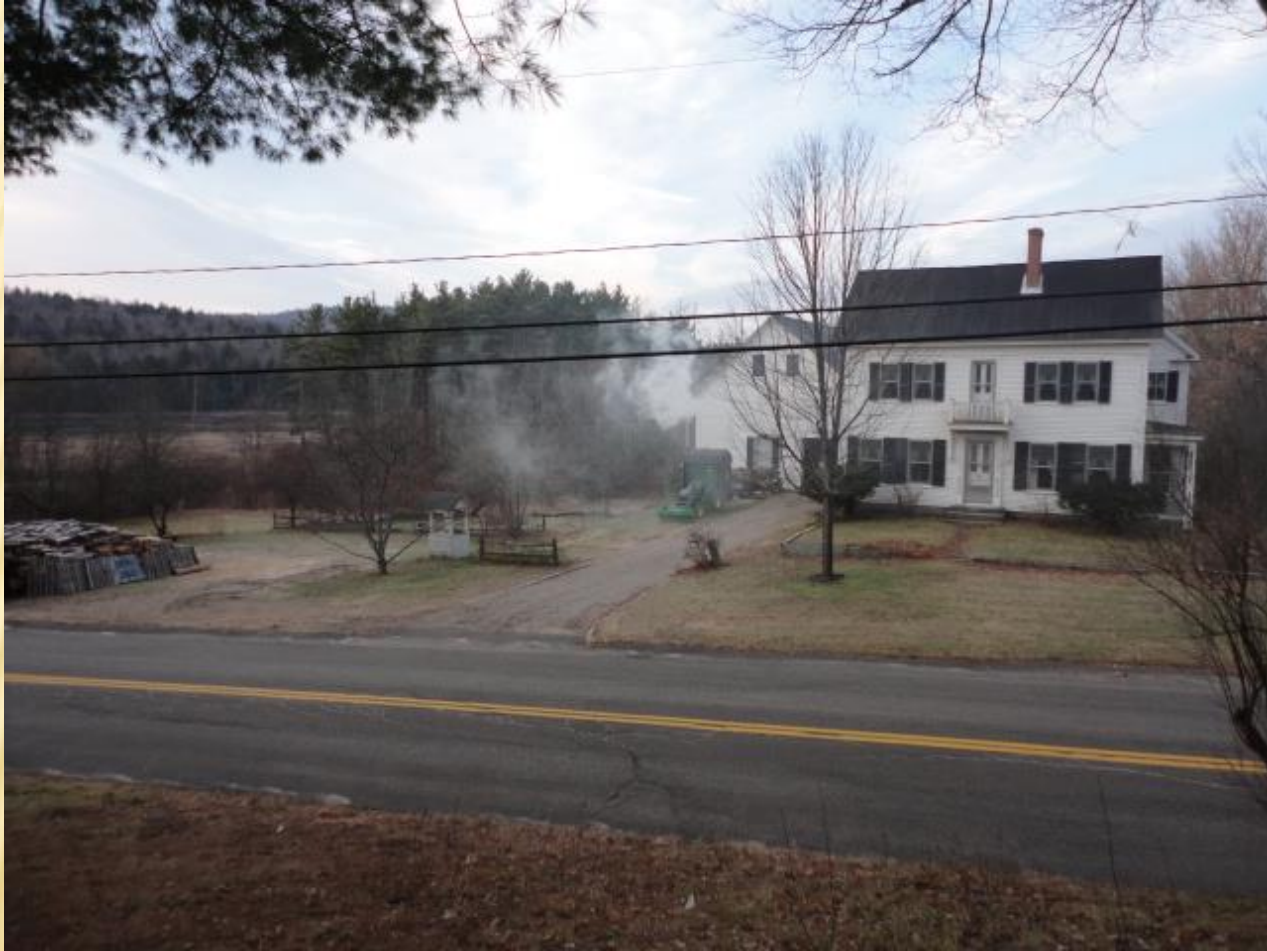
After:



CASE STUDY 2: OLD GRANITE RD., OSS�PEE

- ✘ Smoke complaint from neighbor
- ✘ DES determined that installation was prior to the law going into effect
- ✘ Installation was legal and outside DES jurisdiction

CASE STUDY 2: OLD GRANITE RD., OSS�PEE



CASE STUDY 2: OLD GRANITE RD., OSS�PEE



OPEN BURNING

Linda Magoon
NHDES Air Resources Division
Compliance Assessment Bureau

NH Dept. of Environmental Services
Air Resources Division

February 13, 2019



OUR AGENDA

- ✘ What is Open Burning?
- ✘ What open burning activities are allowed vs. prohibited?
- ✘ What materials can I (lawfully) burn?
- ✘ Responding to complaints

OPEN BURNING

- ✘ The burning of combustible material where emissions do not vent through a stack, chimney, or flue, but are released directly into the air.

PROHIBITED MATERIALS

1973 - Tires and Tubes Prohibited

Env-A 1001.07



PROHIBITED MATERIALS

2001 – Banned Residential Trash Burning

RSA 125-N, Dioxin Reduction Program

Env-A 1001.06



Prohibited Materials

Salvaging Operations (*Env-A 1001.08*)



PROHIBITED MATERIALS

Treated Wood Env-A 1001.05

Applies to any **treated** dimensional lumber, plywood and pallets

Cannot be painted, stained, pressure treated, glued, oiled



**Pressure
Treated &
Painted!**

PROHIBITED MATERIALS

- ✘ 2008 Banned the Burning of the Clean Wood Component of Construction & Demolition

RSA 125-C:10-c



Construction and Demolition Debris

Env-A 1001.06



WHAT IS C & D?

- ✘ Asphalt
- ✘ Bricks
- ✘ Concrete
- ✘ Drywall
- ✘ Glass
- ✘ Insulation
- ✘ Plaster
- ✘ Yes, Wood



C & D **CANNOT** BE BURNED AS A MEANS OF DISPOSAL

That means:

- ✘ Construction
- ✘ Repair
- ✘ Remodel
- ✘ Demolition



From Structures and Roads
Even if it's untreated (Clean)!!

ACCEPTABLE THINGS

CAMPFIRE



ACCEPTABLE THINGS

COOKING FIRE



ACCEPTABLE THINGS

BRUSH DISPOSAL



CELEBRATIONS



Acceptable Fuel (or, What is Brush?)

Tree tops, limbs, saplings and tree cuttings, including attached leaves, which are 5 inches in diameter or less.



ACCEPTABLE FUEL

- ✘ Discarded pallets



- ✘ Untreated scrap wood from manufacture or construction of furniture, bookcases or other related items

OBTAIN A BURN PERMIT!

- ✘ Obtain a Burn Permit from Local Fire Warden
- ✘ Does your municipality have local burn regulations?



BURN PERMITS (CONT'D)

- ✘ Contact NH Division of Forests and Lands
(603) 271-2214 for more info.



COMPLAINT RESPONSE

- ✘ Call us! NHDES investigates outdoor wood boiler and open burning complaints, often with assistance from local officials, fire warden, or state forest rangers
- ✘ Indoor burning - no authority to enter private residences – outreach and education

COMPLAINT RESPONSE

✘ Contact:

Linda Magoon

(603) 271-0907

Linda.Magoon@des.nh.gov

I. COMPLAINANT CONTACT INFORMATION (Leave this section blank if you wish to remain anonymous)		
COMPLAINANT'S (YOUR) NAME:		
STREET ADDRESS:		
MAILING ADDRESS:		
CITY/TOWN:	STATE:	ZIP:
How should we contact you?		
<input type="checkbox"/> At above address	<input type="checkbox"/> Phone #:	<input type="checkbox"/> Email:

II. ALLEGED SOURCE OF THE COMPLAINT
BUSINESS NAME (if applicable) or INDIVIDUAL NAME:
STREET ADDRESS:
CITY/TOWN:
PHONE #:

Linda.Magoon@des.nh.gov or phone (603) 271-1370; Fax (603) 271-7053
PO Box 95, Concord, NH 03302-0095
www.des.nh.gov

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MUNICIPAL AUTHORITY

A Fire Chief has the Authority to
Extinguish a fire to prevent or abate
open burn violations

Even if a burn permit was issued!

Even if the ground is covered in snow!!

SUBSCRIBE TO E-NEWS - DES.NH.GOV

The screenshot shows the NHDES website homepage. At the top, there is a navigation bar with links for PUBLIC, GOVERNMENT, BUSINESS, and A to Z LIST. Below this is a large 'Welcome!' banner with the text 'New Hampshire Department of Environmental Services'. A main headline reads 'Investigation into the presence of Per- and Polyfluoroalkyl Substances (PFASs) in New Hampshire'. The page is divided into several sections: 'NHDES News' (listing recent news items from January 2019), 'What's New' (listing updates like 'Post-Hazard Event Summary - Ice Jam, South Branch Piscataquog River'), and 'Hot Topics' (listing draft water quality certifications and TMDL reports). On the left side, there is a sidebar with a menu, 'OneStop' information, 'ALERTS', and a 'New Hampshire Environmental Dashboard' with a '#ThisIsNH' hashtag. On the right side, there is a search bar, an 'NHDES Calendar', 'The Department' information, 'Quick Links', and 'How Do I...' information. A red arrow points to the 'e-news' subscription link in the sidebar.

Environmental Services
NEW HAMPSHIRE
DEPARTMENT OF

Public **Government** **Business** **A to Z List**

Welcome!
New Hampshire Department of Environmental Services

Investigation into the presence of Per- and Polyfluoroalkyl Substances (PFASs) in New Hampshire

NHDES News

- January 15, 2019
Stone Wall Mapping Project Uses New Technology To Honor The Past
- January 4, 2019
NHDES Recommends Lower Arsenic Level
- January 2, 2019
NHDES Proposes New PFAS Drinking Water Standards
- December 28, 2018
NHDES And NH HSEM Reminds Granite States About Ice Jams
- December 14, 2018
Winnepesaukee River Basin Program Wins Waste Water Plant Of The Year Award (POTY) Award
- December 13, 2018
NHDES Awards \$4.2 Million In Wetlands Protection Grants
- November 26, 2018
Drinking Water Project Ribbon Cutting Ceremony

What's New

- Post-Hazard Event Summary - Ice Jam, South Branch Piscataquog River
- 2018 Ocean Diesel Grant
- Drought Management
- NH Drinking Water And Groundwater Trust Fund Website
- State Of New Hampshire Air Quality - 2017: Air Pollution Trends, Effects And Regulation
- State Of New Hampshire Air Quality - 2017: Executive Edition
- Volkswagen Settlement
- Environmental News Newsletter
- New Hampshire's Environmental Dashboard

Hot Topics

- Draft 401 Water Quality Certification For Maintenance Dredge Of Hampton And Seabrook Harbor Available For Public Comment
- Draft 401 Water Quality Certification For Commercial Development In Seabrook Available For Public Comment
- Final Phosphorous TMDL For Phillips Pond In Sandown
- EPH's Review Of The Final Phosphorous TMDL Report For Phillips Pond In Sandown NH
- EPH's Approval Letter For The Final Phosphorous TMDL Report For Phillips Pond In Sandown, NH
- Alert!** Obtaining Emergency Authorization To Repair/ Replace Damaged Culverts
- New Hampshire National Pollutant Discharge Elimination System Study Commission
- Approved 401 Water Quality Certification For RHDOT Route 16 Improvements In Dummer
- Wetlands Bureau Rulemaking And Process Improvement Effort
- Great Bay Estuary

Search this site **Go!**

NHDES Calendar						
1	2	3	4	5	6	7
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

The Department

- Comptroller's Office
- Air Resources Division
- Waste Management Div.
- Water Division
- Boards and Committees

Quick Links

- Administrative Rules
- Air Quality Forecasting
- Certification/Training
- Directions to NHDES
- Disaster Preparedness & Response
- Emergency Phone #s
- Employment Opportunities
- File Review
- Forms/Applications
- Geologic Information
- Grants/Loans
- Laboratory Services
- Lake Level Data
- Legislative Activity
- Permits
- Publications/Fact Sheets
- Public Info/Help
- Requests for Proposals
- Telephone Directory

How Do I...

- become a volunteer?
- get my water tested?
- log a complaint?
- report a hazardous spill?
- report a violation?
- reduce air pollution?

#ThisIsNH
New Hampshire Environmental Dashboard

e-news

New Hampshire Environmental Councils

Adobe Acrobat Reader format. Download a free reader from [Adobe](#).

NHDES is working to make all of our online documents fully accessible. If you have any problems accessing a particular file, please contact us and we will make the

E-NEWS

- ✘ Municipal EcoLink
- ✘ Rulemaking Notices
- ✘ Beach Advisories
- ✘ *Environmental News*
- ✘ . . . And more



Join the N.H. Department of Environmental Services e-Mail Mailing List

Choose the news you want to receive from the list below.

Email:

Confirm Email:

First Name:

Last Name:

company:

addr1:

addr2:

city:

state:

zip:

Email Format:

Please specify the newsletters or areas of interest you wish to subscribe to:

- Press Releases (announcements by DES)
- Environmental News (Primary NHDES newsletter)
- GreenWorks (Ideas for a Cleaner Environment)
- Supply Lines with the Source (Newsletter from the DES Drinking Water and Groundwater Bureau)
- The Sampler (DES Volunteer Lake Assessment Program newsletter)
- Wastelines (NH Pollution Prevention Program)
- N.H. Air Rulemaking Notices
- Air Quality Action Day Alerts
- Beach Advisories
- Granite State Clean Cities Coalition Updates
- The Municipal EcoLink (DES e-bulletin for local governments)

RESOURCES: OUTDOOR WOOD BOILERS

- ✘ RSA 125-R – Outdoor Wood Boilers

<http://www.gencourt.state.nh.us/rsa/html/x/125-r/125-r-mrg.htm>

- ✘ NH Fact Sheet URL

<https://www.des.nh.gov/organization/commissioner/pip/factsheets/ard/documents/ard-54.pdf>

- ✘ EPA List of Cleaner Hydronic Heaters

<https://www.epa.gov/compliance/list-epa-certified-hydronic-heaters>

- ✘ Summary of Requirements for Wood-fired Hydronic Heaters

<https://www.epa.gov/sites/production/files/2015-02/documents/20150204fs-hydronic-heaters.pdf>

RESOURCES:

✘ Open Burning: Google “Open Burning NHDES”

The screenshot shows the NHDES website page for "Open Burning - Brush Fires, Campfires, Residential Waste, Construction and Demolition Debris". The page is organized into several sections:

- Navigation:** Divisions > Air Resources > Programs/Bureaus/Units >
- Search:** A search bar with the text "search this site" and a "Go!" button.
- Open Burning Program:** A sidebar menu with links to Overview, Publications, Rules/Regulatory, Education/Outreach, Technical Assistance, Forms/Applications, Related Programs, Resources/Links, and Contact Us.
- Air Resources Division:** A sidebar menu with links to Air Resources Home, Division Overview, Programs/Bureaus/Units, Rules/Regulatory, Publications, and Contact Us.
- The Department:** A sidebar menu with links to Commissioner's Office, Air Resources Division, Waste Management Div., Water Division, and Boards and Committees.
- NHDES Calendar:** A calendar grid for the month of May, with dates 1 through 31.
- Main Content:**
 - Open Burning - Brush Fires, Campfires, Residential Waste, Construction and Demolition Debris**
 - Open burning is -** The burning of combustible material where the emissions do not vent through a stack, chimney or flue, but is released directly to the air. Open burning is regulated under RSA 125-C and New Hampshire Code of Administrative Rules Env-A 1000 Prevention Abatement and Control of Open Sources of Air Pollution. In addition, RSA 125-N prohibits the open burning of household waste. [more...](#)
 - Publications:**
 - [Open Burning Poster](#)
 - [Open Burning of Residential Trash](#) (Fact Sheet ARD-33)
 - [Q & A on the Burning of Construction & Demolition Debris](#) (Fact Sheet CO-20)
 - [Residential Trash Burning](#) (NHDES brochure)
 - Rules/Regulatory:**
 - [RSA 1000: Prevention, Abatement and Control of Open Sources Air Pollution](#)
 - [RSA 125-C](#) Prohibits the Combustion of the Wood Component of Construction and Demolition Debris from the Demolition of Structures
 - Education/Outreach:**
 - [A Clean Campfire: Public Service Announcement for Radio](#) 49
 - [Open Burning and Firefighter Training](#)
 - [What's In That Smoke?](#)
 - [Open Burning Poster](#)
 - [Quick Guide to Open Burning](#)
 - [Residential Trash Burning](#) (Sample Flyer)
 - [Residential Trash Burning](#) (NHDES brochure)
 - [Trash Burning Public Service Announcement for television](#)
 - [\(print version\)](#)
 - [Trash Burning Public Service Announcement for radio](#) 46
 - [\(print version\)](#)
 - Technical Assistance:**
 - For information on alternatives to backyard burning (proper solid waste management, recycling, composting, etc.), contact the [Solid Waste Technical Assistance Program](#) or call your local town office.
 - Forms/Applications:**
 - [Air Complaint Form](#)
 - Related Programs:**
 - [Air Toxic Pollutants](#)
 - [Asbestos Management](#)
 - [Particle Pollution \(Particulate Matter\)](#)
 - [Regional Haze](#)
 - [Solid Waste Recycling & Technical Assistance](#)
 - [Wood Smoke and Wood Stoves/Inserts/Wood Boilers](#)
 - [Live Fire Training and Exercise Training Notification](#)
 - Resources/Links (Consolidated List):**
 - [EPA Backyard Burners Guide](#)
 - [NH Division of Forests and Lands Fire Permits](#)

CONTACT INFORMATION:

- ✘ DES website at
www.des.nh.gov
- ✘ Linda Magoon - (603) 271-0907
 - ▣ linda.magoon@des.nh.gov
- ✘ Tom Guertin – (603) 271-0650
 - + thomas.guertin@des.nh.gov
- ✘ Air Resources Division main number:
(603) 271-1370

QUESTIONS?