



STATE OF NEW JERSEY  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

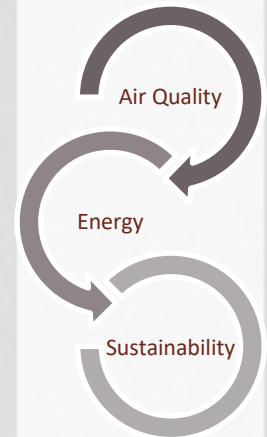


# DIVISION OF AIR QUALITY

## AIR QUALITY, ENERGY, AND SUSTAINABILITY

# MOBILE SOURCE REGULATORY AMENDMENTS

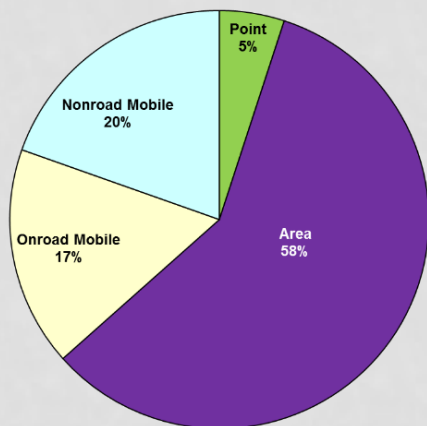
BUREAU OF MOBILE SOURCES



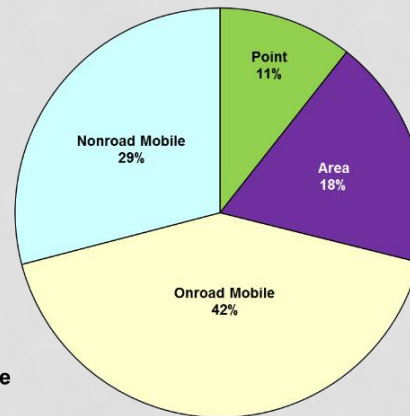
Stakeholder Meeting - September 6, 2019

# CONTRIBUTION OF MOBILE SOURCES TO AIR POLLUTION

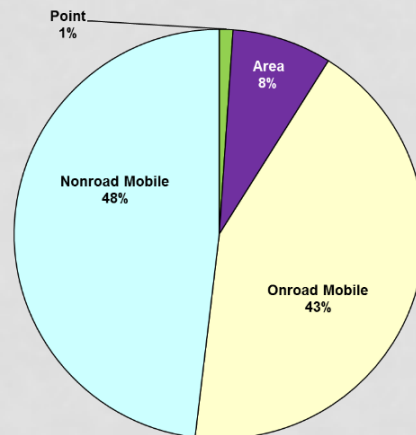
**New Jersey 2017 Volatile Organic Compounds  
Projected Emissions Inventory  
Tons Per Year**



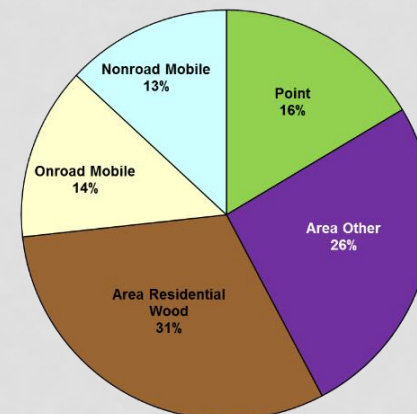
**New Jersey 2017 Nitrogen Oxides  
Projected Emissions Inventory  
Tons Per Year**



**New Jersey 2017 Carbon Monoxide  
Projected Emissions Inventory  
Tons Per Year**



**New Jersey 2017 Fine Particulate Matter  
Projected Emissions Inventory  
Tons Per Year**



Note:  
Area Source fugitive dust emissions are post-adjustment

# OVERVIEW

1. Present what regulations we are changing.
  1. Amend N.J.A.C. 7:27-28 and 29 to adopt California's aftermarket parts requirements (13 CCR 2222) by reference.
  2. Amend N.J.A.C. 7:27-14 and 15 to revise terms and definitions.
  3. Amend N.J.A.C. 7:27A-3.10 to revise penalties.
2. Answer questions and discuss issues.

# N.J.A.C. 7:27-28 AND 29

- N.J.A.C. 7:27-28 is the “Heavy-Duty Diesel New Engine Standards and Requirements Program”
- N.J.A.C. 7:27-29 is the “Low Emission Vehicle (LEV) Program”
- We propose to adopt relevant sections of California Code of Regulations, Title 13, Section 2222 “Add-On Parts and Modified Parts” by reference in both subchapters 28 and 29.

# N.J.A.C. 7:27-28

- N.J.A.C. 7:27-28 is the “Heavy-Duty Diesel New Engine Standards and Requirements Program”
- This regulation provides that New Jersey would adopt California’s emission standards for model year 2005 and newer heavy duty diesel engines(HDDE) and vehicles, should the US EPA fail to implement similarly stringent standards.
- Since the US EPA harmonized their heavy duty diesel standards with California starting with model year 2007, there was no need to enforce this regulation.

# N.J.A.C. 7:27-28 (CONTINUED)

- We propose to adopt California Code of Regulations, Title 13, Section 2222 “Add-On Parts and Modified Parts,” section (k).
  - Section (k) only affects diesel particulate filters (DPFs) and no other parts.
- California HDDEs needing an out-of-warranty DPF replacement would be required to be repaired with California Air Resources Board (CARB)-approved aftermarket parts.
- Since relevant HDDEs in NJ are US EPA or 50-state certified, there is currently no impact projected.

# WHAT IS A DIESEL PARTICULATE FILTER (DPF)?

- DPFs are used on diesel engines to trap unburned hydrocarbons (particulates), or soot.
- Smaller units are designed to last the life of the vehicle or be removed and cleaned.
- Larger units are designed to “regenerate” by burning off the particulates using either fuel combustion or electrical heating.

# WHAT IS A DIESEL PARTICULATE FILTER (DPF)?



## Inside View of a Blocked DPF



( Rear Side )

( Front Side )



# N.J.A.C. 7:27-29

- N.J.A.C. 7:27-29 is the “Low Emission Vehicle (LEV) Program” whereby New Jersey opted into the California vehicle program for light duty passenger cars and trucks, effective January 1, 2009 with model year 2009.
- We propose to amend subchapter 29 to include California Code of Regulations, Title 13, Section 2222 “Add-On Parts and Modified Parts,” sections (h) and (i).
  - Sections (h) and (i) only affect catalytic converters and no other parts.
    - (h) requires CARB-approved catalytic converters
    - (i) prohibits the installation of used catalytic converters

# N.J.A.C. 7:27-29 (CONTINUED)

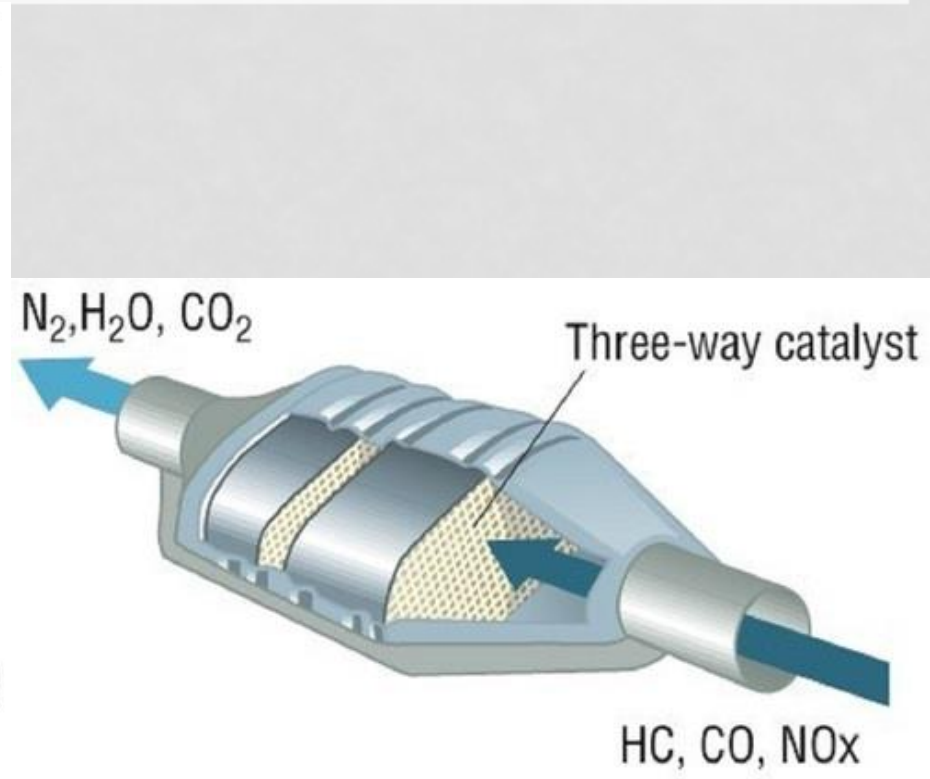
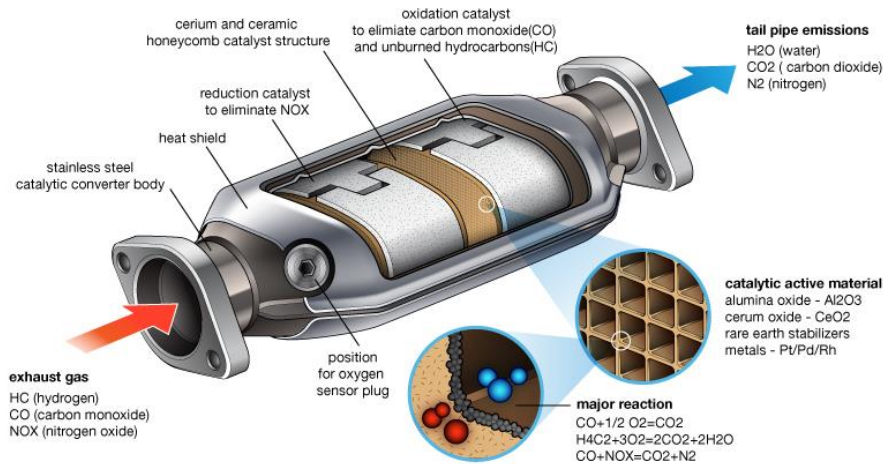
- Affects CARB-approved vehicles in New Jersey
  - Model year 2009 and newer passenger cars and light trucks (with some exceptions) would be impacted.
- If adopted:
  - Vehicles needing an out-of-warranty catalytic converter replacement would be required to be repaired with CARB-approved aftermarket parts.
  - Original Equipment Manufacturer (OEM) parts would be allowed.
  - Used catalytic converters would not be permitted.
  - We would establish procedures for waivers if CARB or OEM converters are not available for a specific vehicle.

# WHAT IS A CATALYTIC CONVERTER?

- The single most important emission control device invented for combustion engines.
- Have been required on most light duty gasoline vehicles since 1975.
- Oxidation catalysts have only one element, to oxidize CO and HC. Three-way catalysts add a second reduction catalyst to reduce NO<sub>x</sub>.
- Air injection is sometimes used to improve the performance of catalytic converters by injecting air into the catalyst.

# WHAT IS A CATALYTIC CONVERTER?

Catalytic converter  
Exhaust & emissions system



# N.J.A.C. 7:27-29 (CONTINUED)

- Our proposed adoption of the CARB aftermarket catalytic converter requirement comes in part from an Ozone Transport Commission (OTC) model rule.
  - The model rule process was a multi-state effort that also engaged industry stakeholders.
- The OTC recommended regional adoption of these California requirements in 2014.
  - They also produced supporting documentation which we can use for outreach and education.
- Both Maine and New York adopted these requirements in 2012. What we are proposing is consistent and could bring further uniformity to the catalytic converter market in the Northeast.

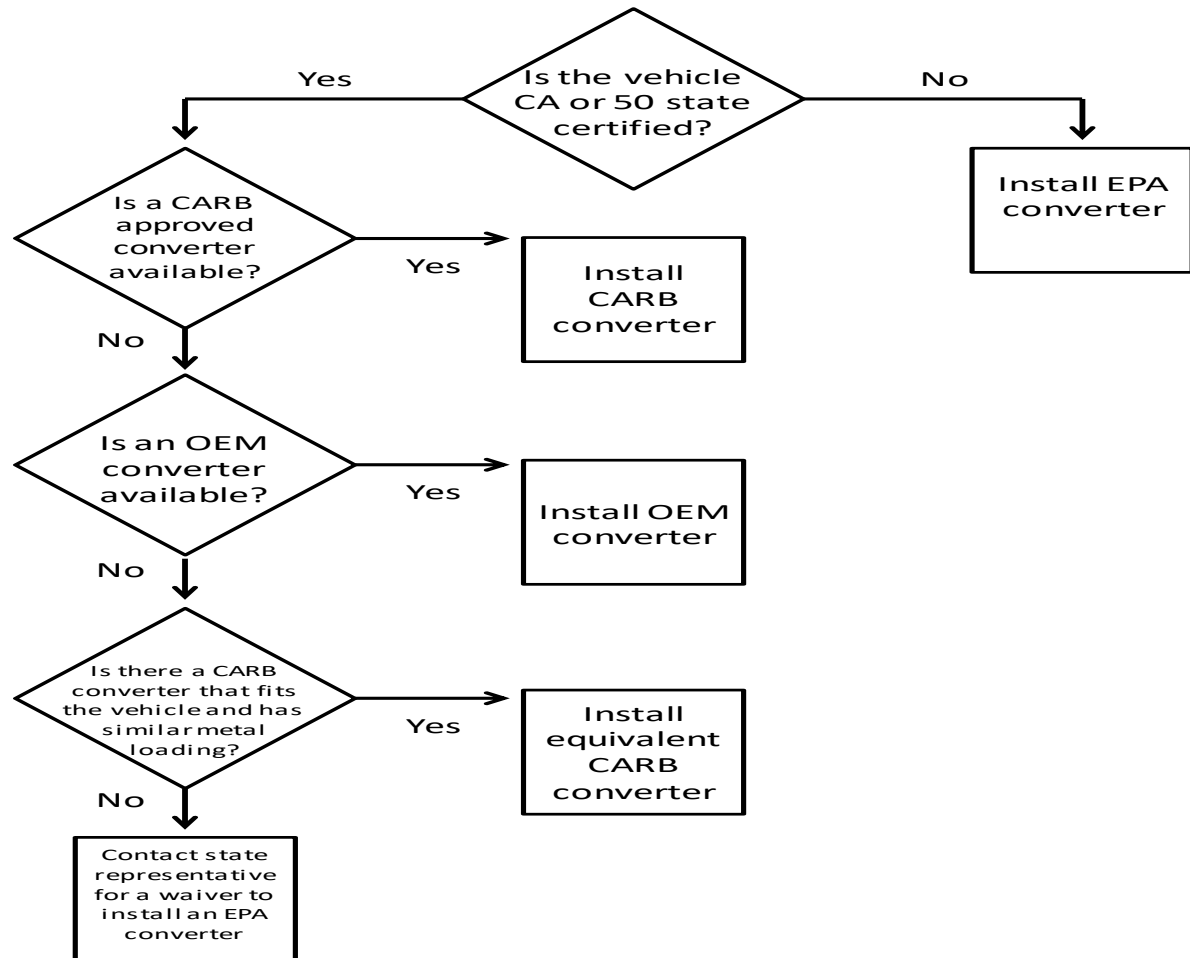
# FEDERAL VERSUS CALIFORNIA CATALYTIC CONVERTERS

- What's the difference between the current EPA-approved catalytic converters and CARB-approved models?

Performance Standard	EPA	California
<b>Emissions</b>	HC/CO/NOx reductions of 70%/70%/30%	Must equal the vehicle's original certification level (e.g., TLEV, LEV, ULEV, etc.)  Must be OBDII-compatible  Used converters no longer allowed
<b>Certification/Testing</b>	Manufacturer certifies to EPA that its catalytic converters meet the requirements	CARB reviews test results from independent labs to certify  EOs are issued to specific engine families  CARB audit-tests converters to be sure that they meet performance standards
<b>Warranty – emissions</b>	25,000 miles	50,000 miles
<b>Warranty – catalyst housing</b>	50,000 miles	50,000 miles
<b>Warranty – coverage</b>	Catalytic converter	Catalytic converter, parts, and labor

# FINDING A CONVERTER THAT FITS

- What's the process to find the right converter that fits a specific vehicle?



# N.J.A.C. 7:27-29 (CONTINUED)

- Although this would increase the cost of aftermarket catalytic converters by several hundred dollars each, the emission reductions are significant.

	NOx	VOC	CO
Emission Reductions (tons/day)	3.0	0.7	7.1
Cost Effectiveness (\$/ton)	\$4,800	\$20,000	\$2,000



# N.J.A.C. 7:27-29 (CONTINUED)

- Stakeholder outreach and education will be essential for this to be effective.
  - Catalytic converter manufacturers and distributors
  - Auto repair shops, dealers, and other installers
  - Auto parts retailers
- We welcome your input on who to notify and how to best reach our target audience.

# N.J.A.C. 7:27-14 AND 15

- N.J.A.C. 7:27-14 regulates the “Control and Prohibition of Air Pollution from Diesel-Powered Motor Vehicles.”
- N.J.A.C. 7:27-15 regulates the “Control and Prohibition of Air Pollution from Gasoline-Fueled Motor Vehicles.”
- Both of these subchapters cover public highway standards, idling restrictions, emission control tampering restrictions and inspection requirements.

# N.J.A.C. 7:27-14 AND 15 (CONTINUED)

- Given recent experience and success with enforcement efforts to find vehicles with tampered emission controls, we propose minor amendments to rule text to better align our regulations with lessons learned during enforcement.
- Clarify several terms and definitions:
  - Replace “owner or operator” with “person.”
  - Revise the definition of “person” to also include auctioneers.

# N.J.A.C. 7:27A-3.10

- N.J.A.C. 7:27A-3.10 establishes “Civil administrative penalties for violation of rules adopted pursuant to the Act.”
- Basically, for any violations of air pollution regulations (e.g. N.J.A.C. 7:27-14, 15, 28, and 29), this is where you would find the civil administrative penalties.

# N.J.A.C. 7:27A-3.10 (CONTINUED)

- New penalties for violations of amendments to N.J.A.C. 7:27-28 and 29.
  - Propose new penalties for installing, selling, offering for sale, or advertising an unapproved DPF or catalytic converter.
- Amend penalties for N.J.A.C. 7:27-14 and 15 to ensure all potential violations are covered and correct typographical errors.
  - Incorporate lessons learned from enforcement efforts as to where we may have unspecified penalties.
  - Add penalties for “Rolling Coal” law (Public Law 2015, Chapter 43).
  - Not creating any new prohibitions.

# STAKEHOLDER FEEDBACK OPPORTUNITIES

- Are there any questions about this material or our regulations?
- Specific issues for consideration and discussion are on subsequent slides.

# N.J.A.C. 7:27-29

## DISCUSSION ISSUES

- Issues for discussion:
  - Schedule
    - How much lead time does the industry need?
      - Maine adopted in 2012 and implemented in 2018.
      - New York adopted in 2012 and delayed enforcement until 2014.
    - Is there overlap between New York and New Jersey markets that could accelerate implementation?
  - Enforcement
    - “No person shall install, sell, offer for sale or advertise”
      - What level of enforcement is appropriate and who should be targeted?
  - Industry assistance
    - How can the manufacturers of converters help us? Do they have a system that already works well for CA, ME, and NY?

# N.J.A.C. 7:27A-3.10

## DISCUSSION ISSUES

- Issues for discussion:
  - Are there any other penalties directly related to N.J.A.C. 7:27-14, 15, 28, and 29 that need revision or anything we should look at?



# COMMENTS

Please send comments and/or technical support information to:

[NJDEP-BAQP@dep.nj.gov](mailto:NJDEP-BAQP@dep.nj.gov)

Use one of the following headings in the Subject Line of the email:

- 1) Consumer Products
- 2) Architectural Coatings
- 3) Aftermarket Catalysts
- 4) Other Mobile Amendments

By October 4, 2019