



Connecticut Department of Energy and Environmental Protection



Greater Connecticut Attainment Demonstration

Draft for Hearing

11/10/16

Kathleen Knight

SIPRAC, DEEP



Connecticut Department of Energy and Environmental Protection

Attainment Demonstration

What is an attainment demonstration?

- 1. A Clean Air Act Requirement.*
- 2. A set of analyses, budgets, strategies and contingency plans which “demonstrate” that an area currently measuring air quality above the standard will measure (or “attain”) levels below the standard by the given deadline.*



When is it required?

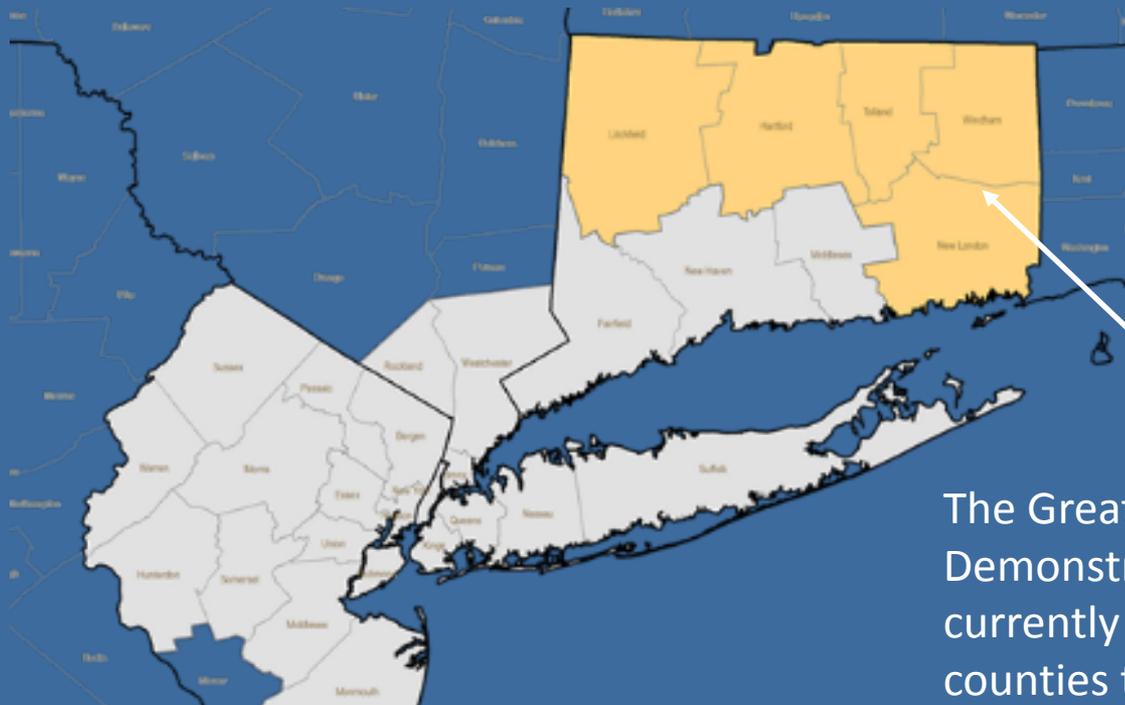
When an ozone nonattainment area is classified as moderate severity or higher.

CAA § 182(b)

Specific to Connecticut—

On June 3, 2016 the two nonattainment areas were reclassified from marginal to moderate. In the ruling, EPA also set an attainment deadline of July 18, 2018 and an attainment demonstration deadline of January 1, 2017.





The Greater Connecticut Attainment Demonstration is the first of two we are currently working on. It covers the 5 counties to the North and East: Litchfield, Hartford, Tolland, Windham and New London.



Connecticut Department of Energy and Environmental Protection

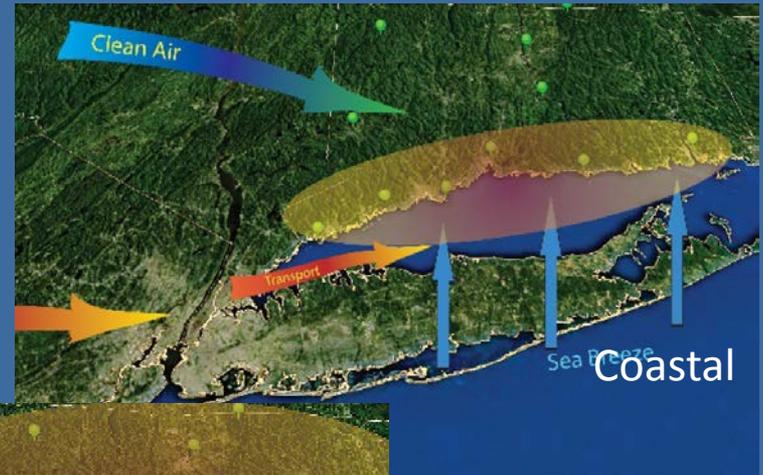
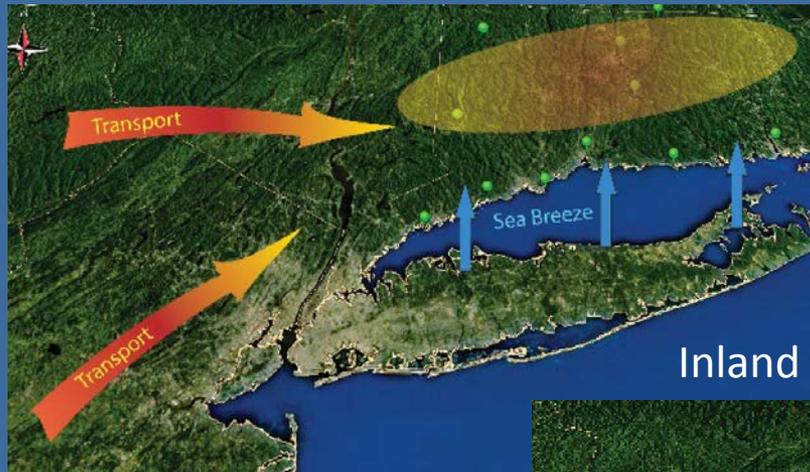
The Required Elements

- Conceptual Model– A description/analysis of the problem.
- Base and Future Year Inventories (*2011 and 2017*)
- Reasonable Further Progress Goals and Demonstration (*15% Emissions Reduction by 2017*)
- Reasonably Available Control Technology/Reasonably Available Control Measure (RACT/RACM) Analysis
- Photochemical Modeling Demonstration
- Transportation Conformity -> Motor Vehicle Budgets
- Contingency Plans (*Additional 3% emissions reductions required if an area fails to meet RFP goals or if an area fails to attain*)



The Conceptual Model

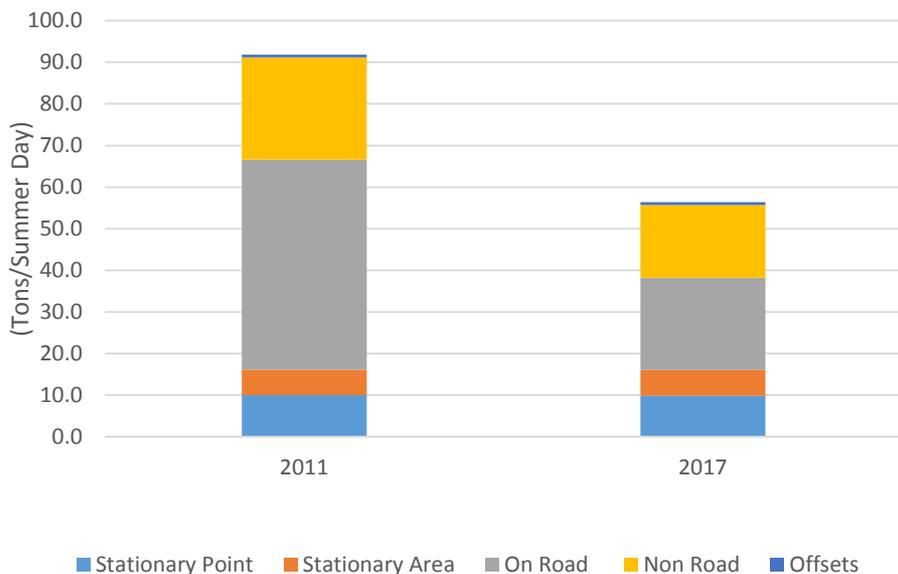
Three Types of Greater Connecticut Exceedances:



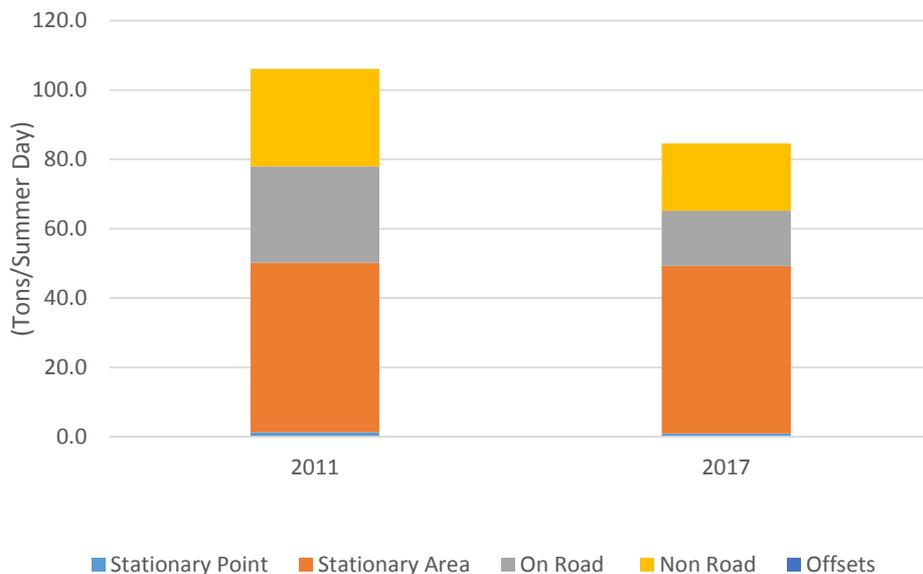
Base and Future Year

Emissions for the Greater Connecticut Area will have large reductions between 2011 and 2017. These reductions are driven primarily by the mobile sector.

Base and Future Year NOx Emissions



Base and Future Year VOC Emissions



In excess of the required RFP (15%), thus the RFP requirement is fulfilled



Connecticut Department of Energy and Environmental Protection

Motor Vehicle Emissions Budgets

In addition to the attainment demonstration for the Greater Connecticut area, the agency is submitting motor vehicle emissions budgets (MVEBs) for the southwestern portion of the state.

Why-

1. For consistency when DOT evaluates their projects.
2. Update the Budgets. Establish more stringent limits on transportation planning while the SWCT attainment plan is prepared.



Motor Vehicle Emissions Budgets

Greater Connecticut Budgets

Pollutant	2017 MVEB (tons per ozone season day)
VOC	15.9
NOx	22.2

Southwest Connecticut Budgets

Pollutant	2017 MVEB (tons per ozone season day)
VOC	17.6
NOx	24.6



Strategies and Controls that get us there..

On-Road:

- Tier 1 Vehicle Standards
- Reformulated Gasoline
- On-Board Vapor Refueling
- National Low Emission Vehicle Program
- Tier 2 MV Controls/30 ppm Sulfur Gasoline
- Heavy-Duty Diesel Vehicle Controls and Fuels
- CT OBD-II Enhance I/M Program
- 2007 High Motorcycle Emissions standards
- CT LEV2
- CT LEV3
- Tier 3 Vehicle Standards

Non-Road:

- Compression Ignition Diesel Engines Tier 1-4
- Spark Ignition Engines
 - Phase I SI Engines <25HP
 - Phase II Non- Handheld SI Engines
 - Phase II Handheld SI Engines
 - Gasoline SI Marine Engines
 - Large Spark Engines
 - Rec. Land Based Spark Engines
- Marine Diesel
 - APPS
 - Commercial Marine Vehicles
 - Recreational Equipment
 - Marine Diesel Engines
 - Spark engines
- Locomotives
 - New and Remanufactured Locomotives
 - Non-Road Diesel Fuel
 - Aircraft 1-3

Stationary and Area:

- CSAPR (Upwind areas- Does not apply to CT)
- RICE NESHAP
- ICI Boilers and Process Heater MACT
- Mercury and Air Toxics Standards
- Portable Fuel Container Rule
- Metal Furniture Coating
- Paper Film and Foil Coating
- Flexible Package Printing
- Offset Lithographic and Letter Press Printing
- Large Appliance Coating
- Industrial Solvent Cleaning
- Spray application equipment cleaning
- Mic Metal and Plastics Parts Coating
- Pleasure Craft Coating
- Above ground Storage Tanks
- Stage I
- Sulfur Limits for heating oil



Additional Strategies/Controls...

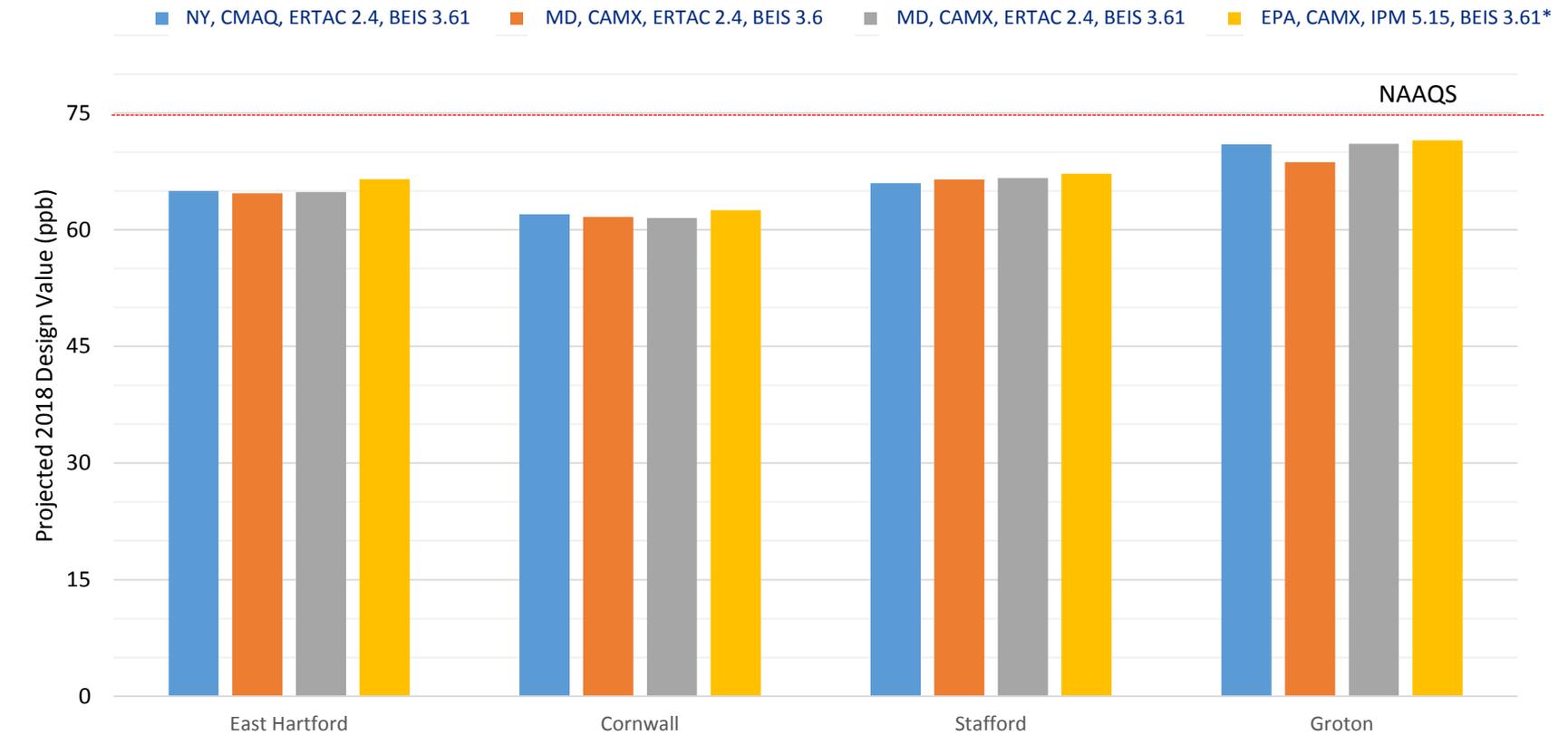
..not accounted for in the modeling but will aide in ensuring we get to attainment.

- MWC
- Architectural Coatings
- Control of NOx from major sources (22e and 22f)
- Electric Vehicle MOU
- Consumer Products
- CSAPR Update from upwind states
- CSAPR Full Remedy?



Modeling indicates attainment

Greater Connecticut Projected Design Values With Differing Models and Inputs



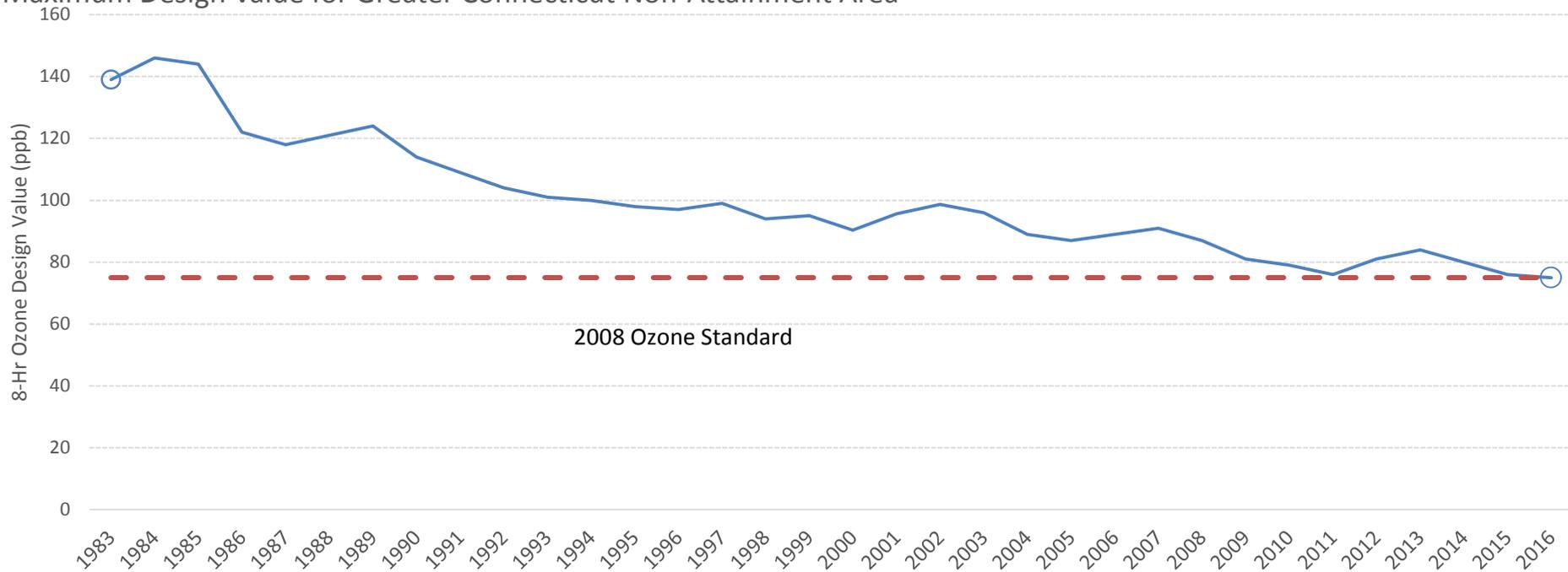
*2017 DVs



The Monitoring/Ground Truth

For the Greater Connecticut Area the analyses indicated that it is likely the Greater Connecticut Area will attain the standard in the 2017 ozone season.

Maximum Design Value for Greater Connecticut Non-Attainment Area

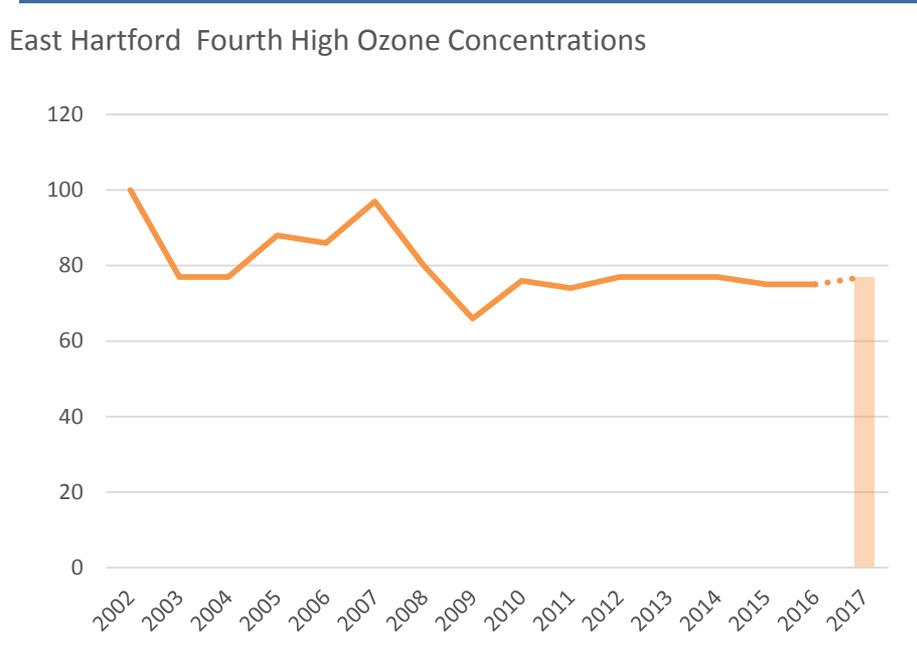
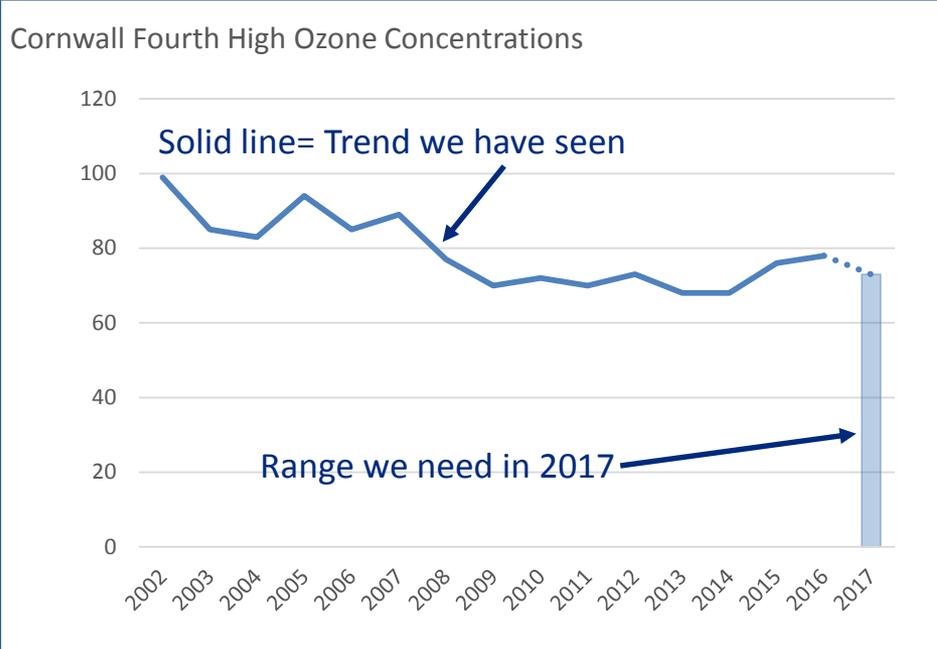


What we need in 2017 to attain 75 ppb

Site	Maximum 4 th High
Cornwall	73
East Hartford	77
Groton Fort Griswold	75
Stafford	83
Abington (CASTNET)	89

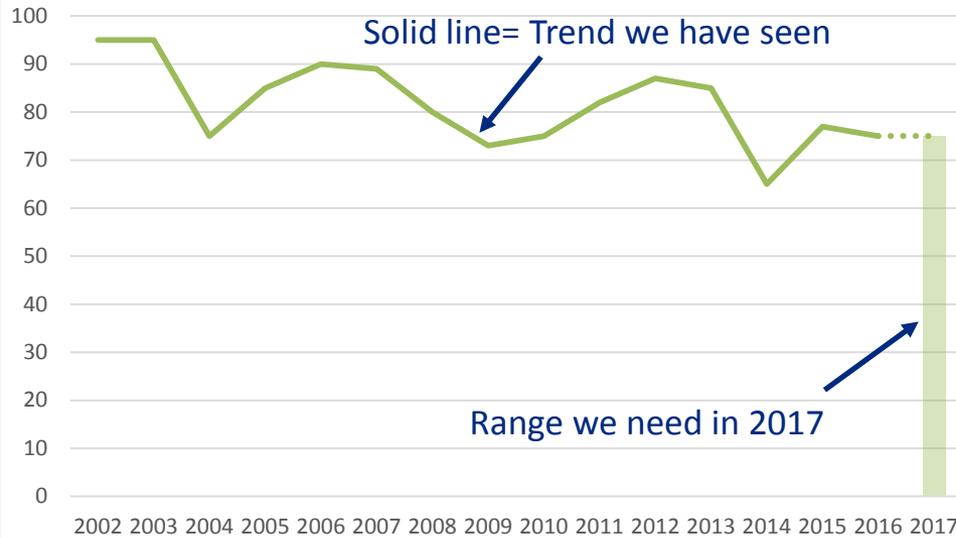


Are we likely to see those needed values?

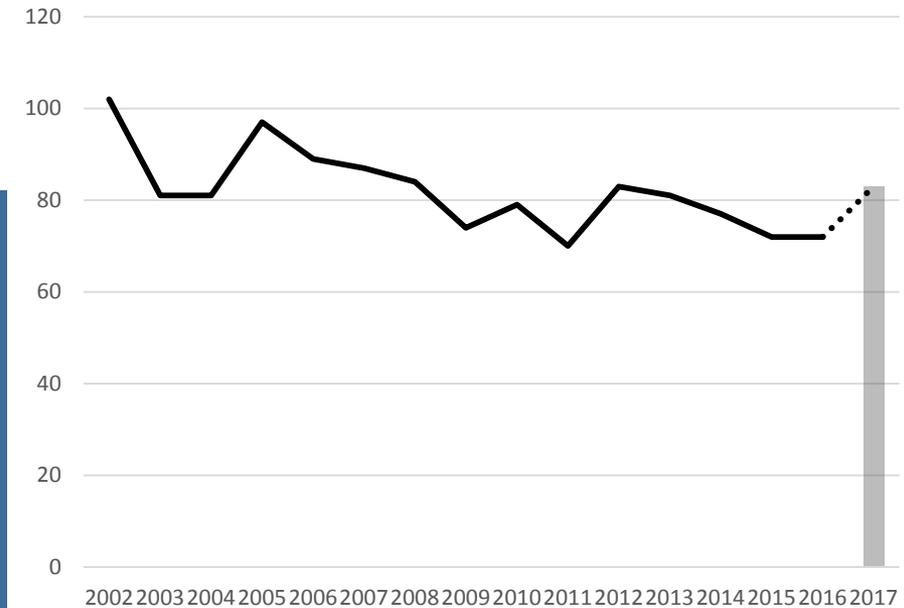


Are we likely to see those needed values?

Groton Fourth High Ozone Concentrations



Stafford Fourth High Ozone Concentrations



Comments and Hearing

http://www.ct.gov/deep/cwp/view.asp?a=2684&q=585816&deepNav_GID=1619

Comments must be received by November 28th, 2016
5:00 PM.

Mail to: Kate Knight
Air Bureau 5th Floor
79 Elm St Hartford, CT 06106-4064

Email to: Kathleen.Knight@ct.gov

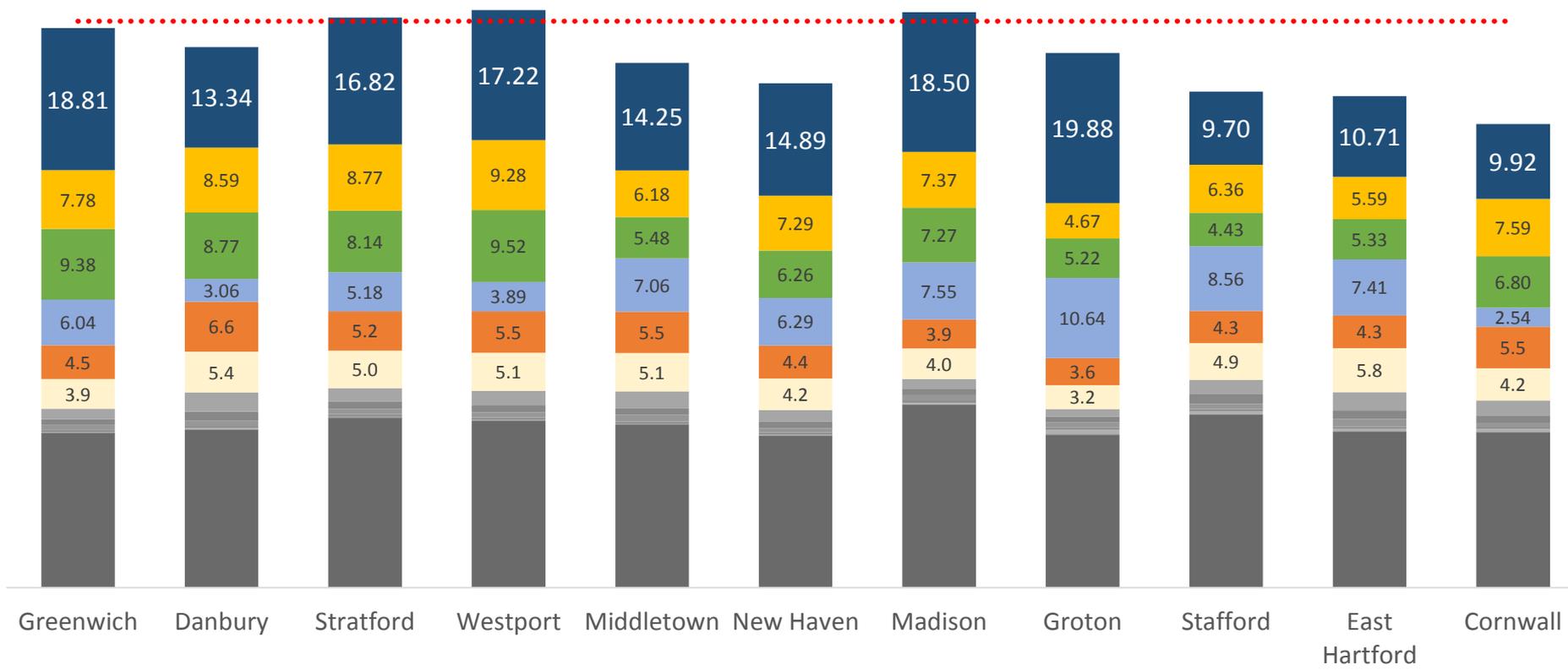
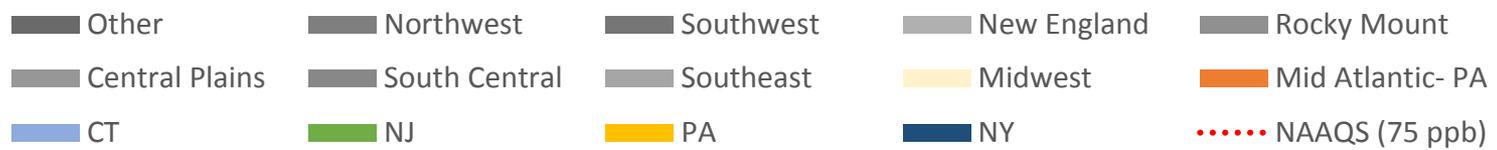
A hearing will be held here at DEEP in the Holcombe
Room November 28, 2016 at 1:00 PM



Connecticut Department of Energy and Environmental Protection

Stay tuned for the NY-NJ-CT Attainment Plan

Contributions to Connecticut Monitors



What is an equitable share of the reductions needed?



Questions?

Enter Name

Enter Title

Enter Email

Enter Phone

Enter Web site if desired

