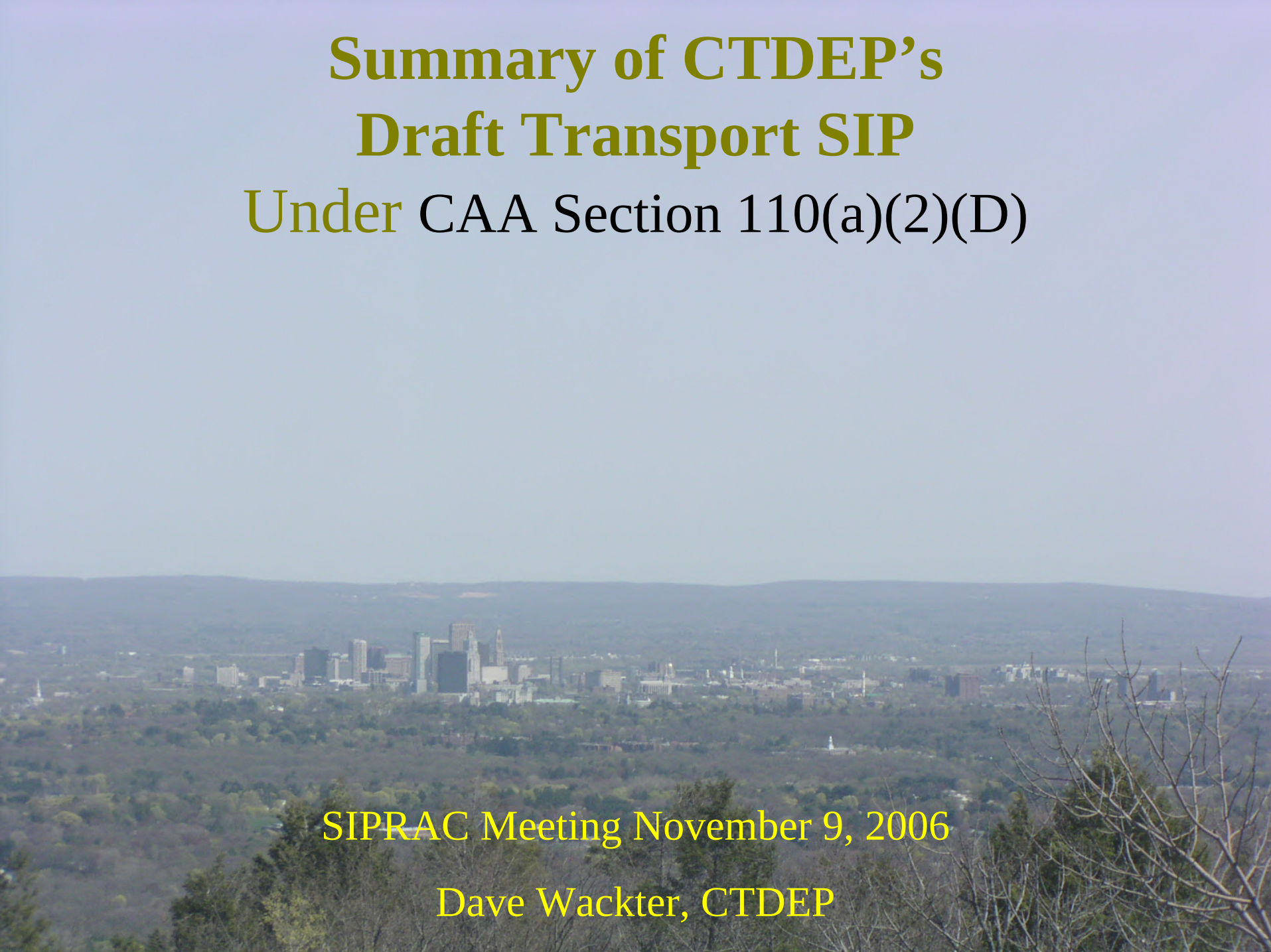
Summary of CTDEP's Draft Transport SIP

Under CAA Section 110(a)(2)(D)



SIPRAC Meeting November 9, 2006

Dave Wackter, CTDEP

Overview

- Provisions of CAA Section 110(a)(2)(D)
- Consent decree ED and ALA vs. EPA
- Summary of CT’s Proposed SIP

CAA Section 110(a)(2)(D)(i) requires each SIP to prohibit in-state emissions that:

1. Contribute significantly to nonattainment or maintenance of any NAAQS in any downwind state; or
2. Interfere with PSD or visibility protection in any other state.

When were 110(a)(2)(D) SIPs due?

- 3 Years after NAAQS promulgation
- O3 and PM2.5 NAAQS promulgated in 1997
- SIPs due in 2000
- But litigation postponed implementation
- Designations finalized in June 2004

Timeline: Consent Decree between EPA and Environmental Defense/ALA

- Notice of civil action March 16, 2004
- Proposed CD March 10, 2005
- EPA FR Notice to states for failure to submit April 25, 2005
- Started 2 yr clock for promulgation of FIPs unless EPA approves SIPs earlier
- FIPs, if needed, due May 25, 2007

CTDEP Concerns

- EPA asserts that:
  - CAIR, new engine stds, etc. adequately reduce interstate transport of air pollution
  - "Residual nonattainment" can be dealt with through local control measures
- OTC modeling suggests that:
  - Aggressive local control measures will not ensure timely attainment of the O3 and PM2.5 NAAQS

CTDEP's Proposed 110(a)(2)(D) SIP

Analyses will be provided for:

- O3
- PM2.5
- PSD
- Visibility

Ozone Analysis

- Utilize CAIR and OTC modeling
  - CT's influence on nonattainment in downwind states
  - Significant impact on NY and RI
  - OTC modeling: RI likely to attain by 2009
  - NY along with CT and NJ attainment plan due in June 2007 (additional emission reductions will be needed)
  - BUT, many other states contribute significantly to CT's n.a. (NY, NJ, PA, MD/DC , PA, VA, WV…)

Excerpts from CAIR TSD Table VI-5.

Upwind States that make a significant contribution to 8-hour ozone in each downwind nonattainment county.

Downwind State/County	Upwind States
CT Fairfield	MD/DC NJ NY OH PA VA WV
MD Kent	MI NC OH PA VA WV
NJ Middlesex	DE MD/DC MI NY OH PA VA WV
NY Suffolk	CT DE MD/DC MI NC NJ OH PA VA WV
RI Kent	CT MA NJ NY OH PA VA

Excerpts from CAIR TSD Table VIII-4.

Table VIII-4. Projected 8-hour concentrations (ppb) for the 2010 base case and CAIR, and the impact of CAIR in 2010.

State	County	2010 Base Case	2010 CAIR	Impact of CAIR
Connecticut	Fairfield Co	92.6	92.2	-0.4
Connecticut	Middlesex Co	90.9	90.6	-0.3
Connecticut	New Haven Co	91.6	91.3	-0.3

Excerpts from CAIR TSD Table VI-2.

Table VI-2. Percent contribution to 8-hour ozone nonattainment due to transport from upwind States.

2010 Base Nonattainment Counties	2010 Base 8-Hour Ozone (ppb)	Percent of 8-Hour Ozone due to Transport
Fairfield CT	92	80 %
Middlesex CT	90	93 %
New Haven CT	91	95 %
Washington DC	85	38 %
Newcastle DE	85	37 %
Fulton GA	86	24 %
Anne Arundel MD	88	45 %
Cecil MD	89	35 %
Harford MD	93	31 %
Kent MD	86	47 %
Macomb MI	85	43 %
Bergen NJ	86	38 %

PM2.5 Analysis

- Utilize CAIR, OTC and CTDEP modeling
  - CT's influence on nonattainment in downwind states
  - Insignificant impact on NYC in 2002
  - EPA CAIR modeling projects NYC attains by 2010
  - NY with CT and NJ attainment plan due in Apr 2008

Excerpts from CAIR TSD Table VII-1. Maximum downwind secondary PM2.5 contribution (µg/m3) for each of 37 upwind states (i.e., effect of NOx and SO2 emissions).

Upwind State	Maximum Downwind Contribution	Upwind State	Maximum Downwind Contribution
Alabama	0.98	Nebraska	0.07
Arkansas	0.19	New Hampshire	<0.05
Connecticut	<0.05	New Jersey	0.13
Delaware	0.14	New York	0.34
Florida	0.45	North Carolina	0.31
Georgia	1.27	North Dakota	0.11
Illinois	1.02	Ohio	1.67
Indiana	0.91	Oklahoma	0.12
Iowa	0.28	Pennsylvania	0.89
Kansas	0.11	Rhode Island	<0.05
Kentucky	0.90	South Carolina	0.40
Louisiana	0.25	South Dakota	<0.05
Maine	<0.05	Tennessee	0.65
Maryland/DC	0.69	Texas	0.29
Massachusetts	0.07	Vermont	<0.05
Michigan	0.62	Virginia	0.44
Minnesota	0.21	West Virginia	0.84
Mississippi	0.23	Wisconsin	0.56
Missouri	1.07		

CTDEP ISC Modeling of Primary PM2.5 Contributions to Highest NYC Monitor

State	Adjusted annual avg Contribution (ug/m^3) (LaGuardia met data)	Adjusted annual avg Contribution (ug/m^3) (Sikorsky met data)
CT	.21	.18
NY	11.05	6.46
NJ	1.37	1.97
Total (ug/m^3)	12.64	8.61

Prevention of Significant Deterioration (PSD) of air quality in downwind states

- CT's NSR regulations and associated SIP require applicants to:
  - Assess all significant impacts on ambient air quality
  - Ensure that PSD increments are not exceeded
  - Notify adjacent states of pending permit applications

CT's Visibility Program

- PSD NSR requires visibility analysis at Federal Class I areas
- Nonattainment NSR requires emissions reductions to offset emissions increases
- Co-benefit of SO2 and NOx reductions
- Regional Haze Plan due Dec 2007
  - Best Available Retrofit Technology
  - Reasonable Progress Goals

SIP Hearing Schedule

- CTDEP to publish notice late November 2006
- Hearing in late December/early January
- Submittal to EPA by March 2007