

**Dannel P. Malloy**

GOVERNOR  
STATE OF CONNECTICUT

Mr. H. Curtis Spalding, Regional Administrator  
USEPA Region 1 - New England  
5 Post Office Square  
*Mail Code:* ORA01-4  
Boston, MA 02109-3912

***Re: Recommended Area Designations for the Revised SO<sub>2</sub> Air Quality Standard***

Dear Administrator Spalding:

I am writing to provide you with Connecticut's recommended designations for the revised national ambient air quality standard (NAAQS) for sulfur dioxide (SO<sub>2</sub>), promulgated by the U.S. Environmental Protection Agency (EPA) on June 2, 2010. Section 107(d)(1)(A) of the Clean Air Act (CAA) provides up to one year after adoption of a new or revised NAAQS for states to submit recommendations identifying areas that comply with the standard or that violate or contribute to nearby violations of the standard.

As described in the final SO<sub>2</sub> NAAQS rulemaking, EPA will designate an area as "attainment" only if both ambient monitoring and computer modeling support such a designation. As outlined in the attached review of data from Connecticut's ambient air quality monitoring network, all existing monitors in the state currently show that Connecticut is in compliance with the revised SO<sub>2</sub> NAAQS. However, like most other states, Connecticut has not completed the required source-specific modeling to identify possible violating sources due to the lack of EPA modeling guidance. Therefore, consistent with EPA's recommendation for areas with compliant monitoring data but no source-specific modeling assessments, Connecticut requests an initial statewide designation of "unclassifiable" until modeling is completed by the June 2013 deadline for submittal of Clean Air Act Section 110(a)(1)-(2) revisions to the State Implementation Plan.

Please contact Anne Gobin, Chief of the Department of Environmental Protection's Bureau of Air Management at 860-424-3026 with any questions regarding this recommendation.

Yours truly,

A handwritten signature in black ink, appearing to read "D. Malloy", written over a white background.

Dannel Malloy  
Governor

cc: Enc (1)  
David Conroy (EPA Region I)  
Commissioner Daniel Esty  
Anne Gobin

## ATTACHMENT

### Summary of Connecticut's SO<sub>2</sub> Ambient Monitoring Data (May 2011)

Section 107(d)(1) of the Clean Air Act (CAA) provides up to one year after EPA's adoption of a new or revised National Ambient Air Quality Standard (NAAQS) for states to recommend initial designation of areas as "attainment", "nonattainment" or "unclassifiable". On June 2, 2010<sup>1</sup>, EPA strengthened the NAAQS for sulfur dioxide (SO<sub>2</sub>) to provide better public health protection. EPA revised the primary SO<sub>2</sub> standard by establishing a new 1-hour standard at a level of 75 parts per billion (ppb). The EPA also specified that the existing SO<sub>2</sub> primary standards (i.e., 140 ppb, 24-hour average and 30 ppb, annual average) will be revoked one year after the effective date of initial designations for the new 1-hour NAAQS for most existing SO<sub>2</sub> attainment areas. EPA intends to finalize initial designations for the new NAAQS by June 2012.

Under the revised SO<sub>2</sub> NAAQS, EPA intends to establish initial designations using a hybrid approach that combines air quality monitoring and source-specific modeling. An initial designation of "attainment" is possible only if both monitoring and source-specific modeling data support such a designation. As described below, Connecticut's SO<sub>2</sub> monitors currently measure compliance with the revised SO<sub>2</sub> NAAQS; however, the monitors are sited to measure general population exposure rather than maximum impacts that could occur in the immediate vicinity of sources operating at their maximum allowable emissions level. EPA is requiring states to evaluate maximum source impacts with dispersion modeling, but has not yet issued complete guidance on how states should conduct this resource intensive modeling exercise. Therefore, consistent with EPA's recommendation for areas with compliant monitoring data but no source-specific modeling assessments<sup>2</sup>, Connecticut requests an initial statewide designation of "unclassifiable" until modeling is completed by the June 2013 deadline for submittal of required CAA Section 110(a)(1)-(2) revisions to the State Implementation Plan.

#### Connecticut's SO<sub>2</sub> Ambient Monitoring Data

The Connecticut Department of Environmental Protection (CTDEP) has been monitoring ambient SO<sub>2</sub> levels at various locations in Connecticut since the early 1970's. Figure 1 provides a historical perspective, depicting annual-average design value trends at the longest running monitoring sites. Annual design values have decreased significantly, with no measured violations of the 30 ppb annual NAAQS since at least 1976. The highest monitored 2010 annual design values was 2 ppb, measured at both the New Haven (Criscuolo Park) and Westport (Sherwood Island) sites.

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<sup>1</sup> Rulemaking for the new 1-hour SO<sub>2</sub> NAAQS was signed by the EPA Administrator on June 2, 2011 and published in the June 22, 2010 Federal Register ([75 FR 35520](#)).

<sup>2</sup> EPA's rulemaking describes the "Expected Designations Process", starting on page 35,570 at [75 FR 35520](#).

Figure 1. Annual SO<sub>2</sub> Design Value Trends<sup>4</sup>

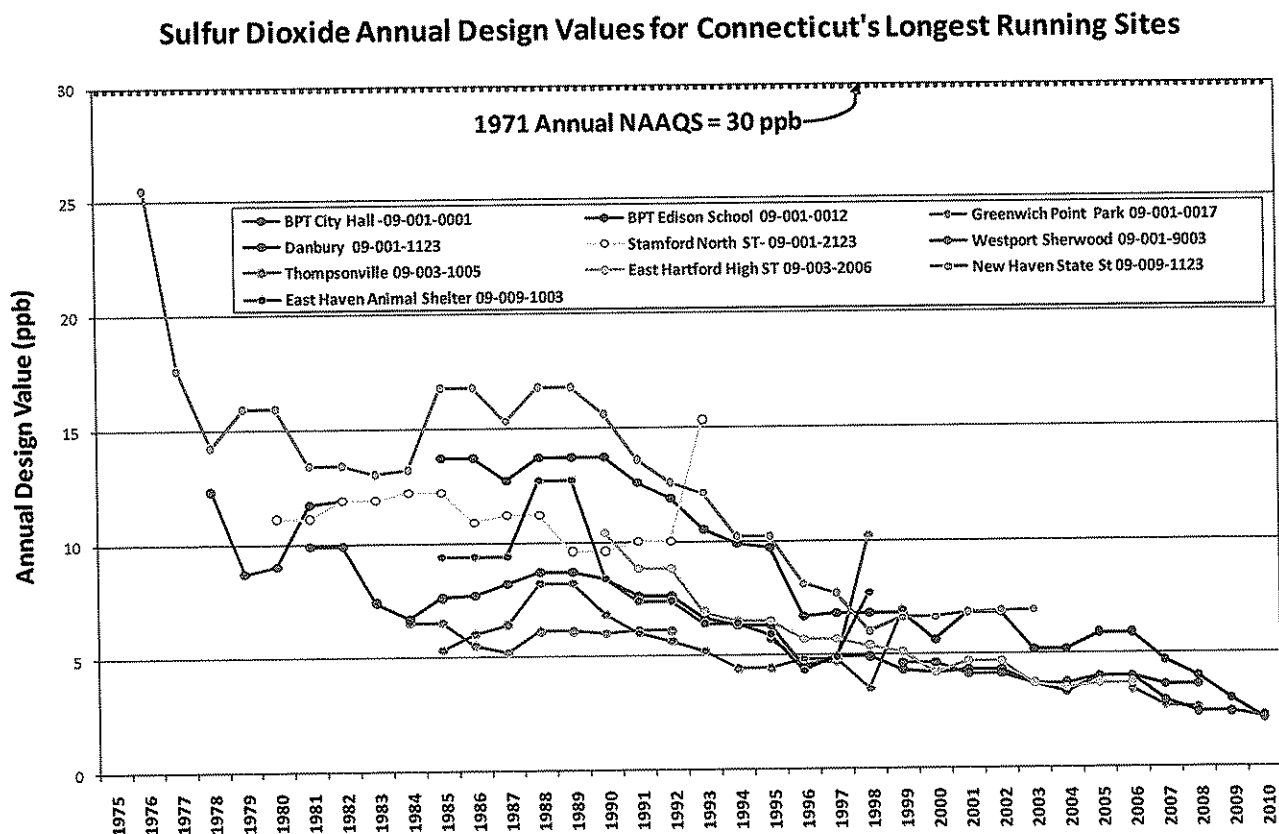
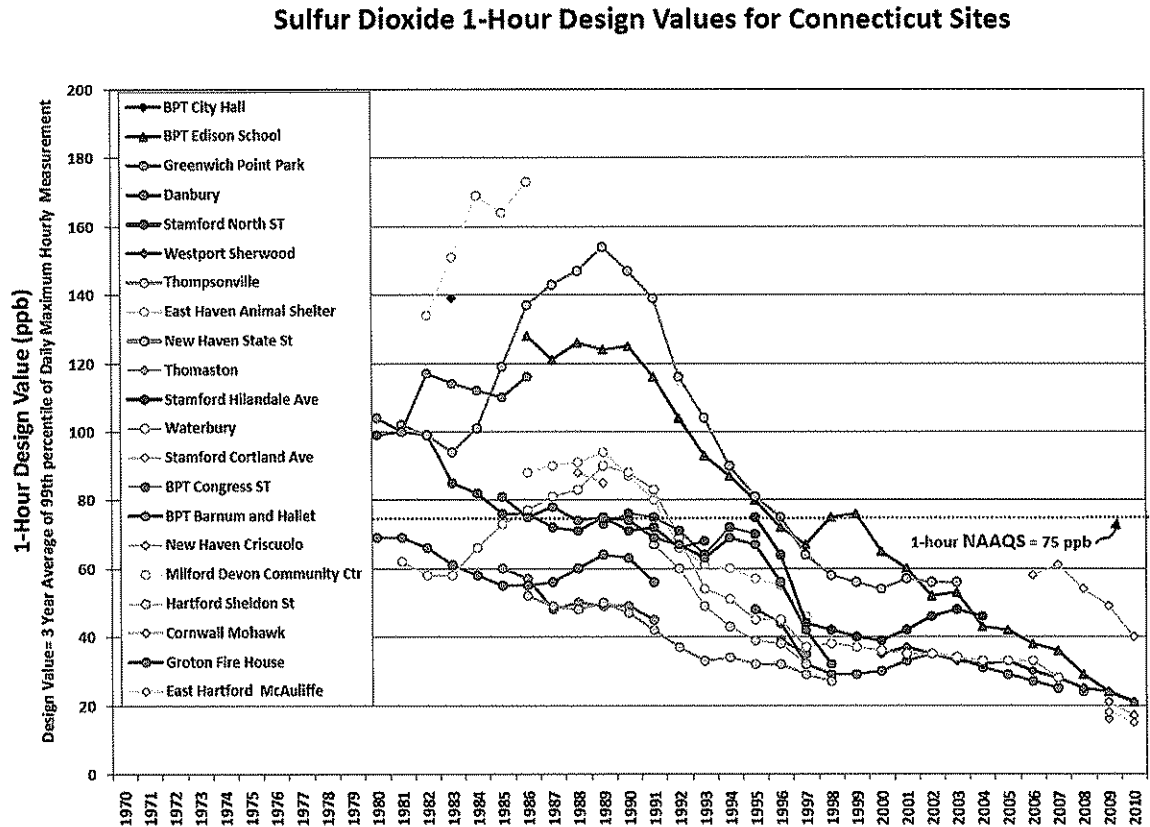


Figure 2 depicts historical 1-hour SO<sub>2</sub> monitored design value<sup>3</sup> trends since 1980 at Connecticut sites, again showing a significant decline in measured values over the period of record. Design values at all monitors have not exceeded the new 1-hour NAAQS of 75 ppb since 2000 or earlier. Design values for the new 1-hour standard have decreased substantially over the period of record; preliminary data for 2010 indicates a maximum monitored design value of 40 ppb measured at the New Haven (Criscuolo Park) site<sup>4</sup>.

<sup>3</sup> Compliance with the new 1-hour SO<sub>2</sub> NAAQS is achieved at a monitor when the 3-year average of the 99<sup>th</sup> percentile of the annual distribution of daily maximum 1-hour average concentrations does not exceed 75 ppb.

<sup>4</sup> The 2008 data for the New Haven (Criscuolo Park) site were incomplete due to site enhancements conducted during the summer, limiting data collection during the 2<sup>nd</sup> and 3<sup>rd</sup> quarters. Thus, design values for 2008, 2009 and 2010 for New Haven (Criscuolo Park) are estimates based on available data. The 2010 data for the Cornwall (Mohawk Mountain) site are also incomplete, again due to site enhancements conducted during the summer and early fall months. Thus, the Cornwall 2010 design value should also be considered an estimated value.

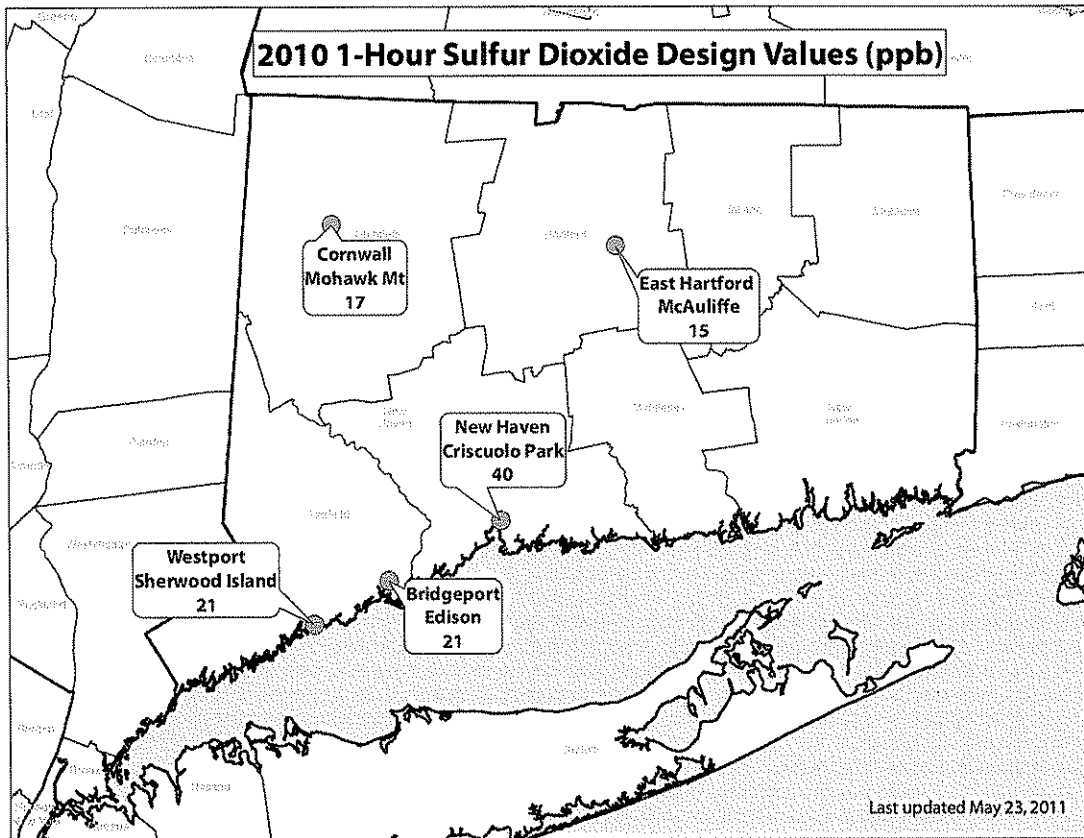
Figure 2. 1-hour SO<sub>2</sub> Design Value Trends<sup>5</sup>



CTDEP’s current SO<sub>2</sub> monitoring network consists of continuous trace monitors operated at five sites: Bridgeport (Edison School), Cornwall (Mohawk Mountain), East Hartford (McAuliffe Park), New Haven (Criscuolo Park) and Westport (Sherwood Island). Figure 3 displays the most recent 1-hour SO<sub>2</sub> design values (for 2010) for these sites. Design values range from a low of 17 ppb at the Cornwall site to a high of 40 ppb at the New Haven site<sup>5</sup>, well below the new 1-hour SO<sub>2</sub> NAAQS of 75 ppb.

<sup>5</sup> See footnote 4.

**Figure 3. 2009 1-Hour SO<sub>2</sub> Design Values<sup>6</sup>**



### **Recommended Initial Designation**

As described above, all CTDEP sites currently measure compliance with the new 1-hour SO<sub>2</sub> NAAQS. However, Connecticut has not completed the required source-specific dispersion modeling to identify possible violating sources due to the lack of complete EPA modeling guidance and the significant work effort involved. Therefore, consistent with EPA’s recommendation for areas with compliant monitoring data but no source-specific modeling assessments, Connecticut requests an initial statewide designation of “unclassifiable” until modeling is completed by the June 2013 deadline for submittal of CAA Section 110(a)(1)-(2) revisions to the State Implementation Plan. If future modeling or monitoring data justify a requirement for establishing nonattainment areas, CTDEP will perform a technical analysis to propose appropriate boundaries for any such area.

<sup>6</sup> See footnote 4.