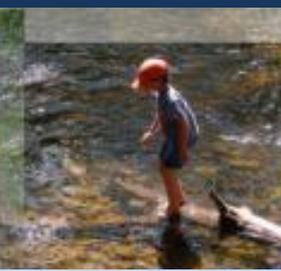




Connecticut Department of Energy and Environmental Protection



Connecticut Department of
**ENERGY &
ENVIRONMENTAL
PROTECTION**

Sulfur Dioxide (SO₂) NAAQS Implementation in Connecticut

Ric Pirolli

January 10, 2013

SIPRAC

Hartford, CT



Connecticut Department of Energy and Environmental Protection

SO₂ Standard & Public Health

- 75 ppb, 1-hr
- Provides substantial protection from high, 5-10 minute concentrations of concern
- Decreases emergency room visits and hospital admissions for respiratory illnesses, notably in at-risk populations such as children, the elderly and asthmatics
- Reduces the formation of PM_{2.5}
 - PM_{2.5} can penetrate deeply into sensitive parts of the lungs, where it can worsen respiratory disease and aggravate existing heart disease, leading to increased hospitalization and premature death



SO₂ Implementation Timeline

- Standard effective August 23, 2010
- EPA holds stakeholder process on guidance, May 2012 – modeling and monitoring key
- Infrastructure SIP due, June 2013
- EPA final designations, June 2013

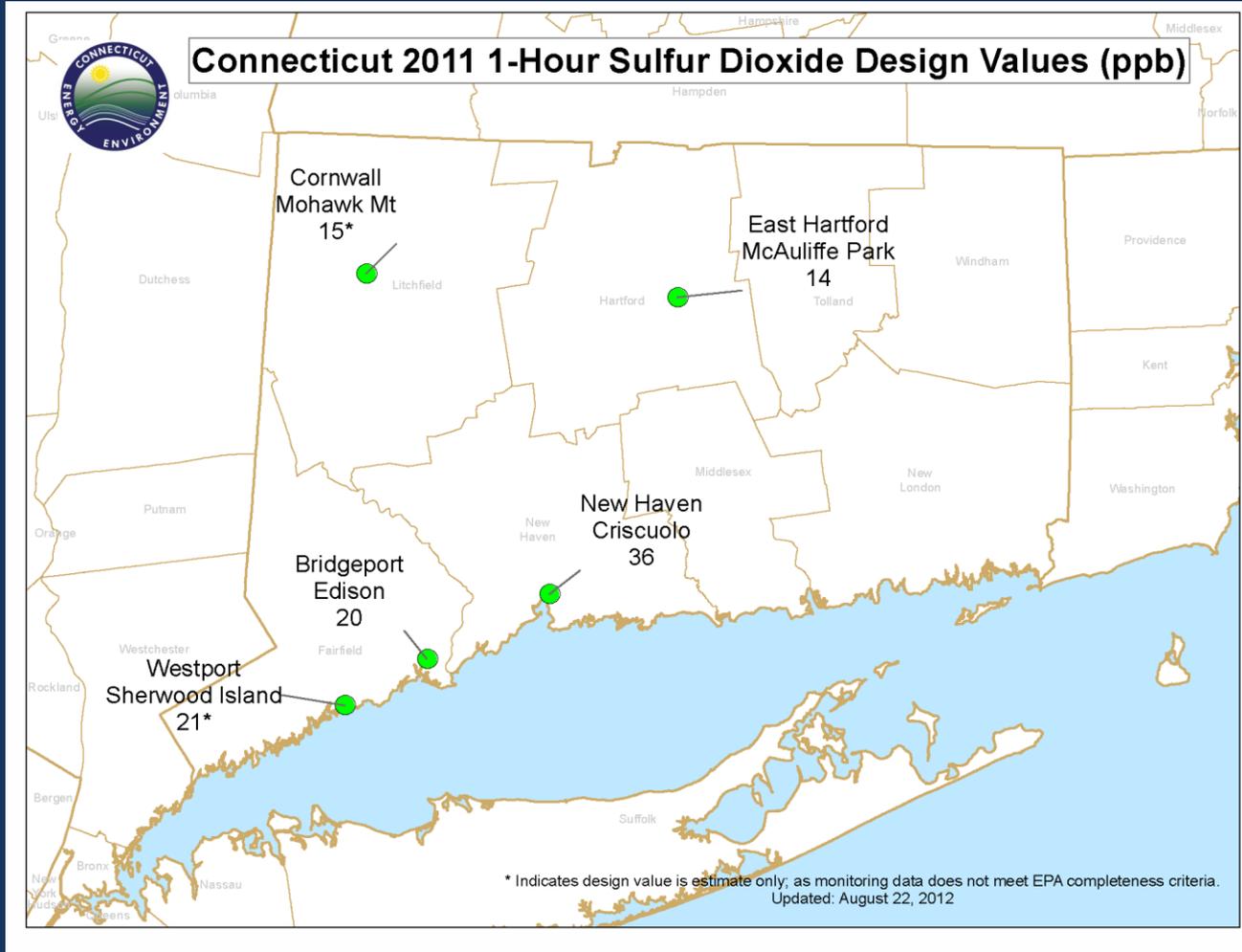


Analysis of SO₂ NAAQS Compliance

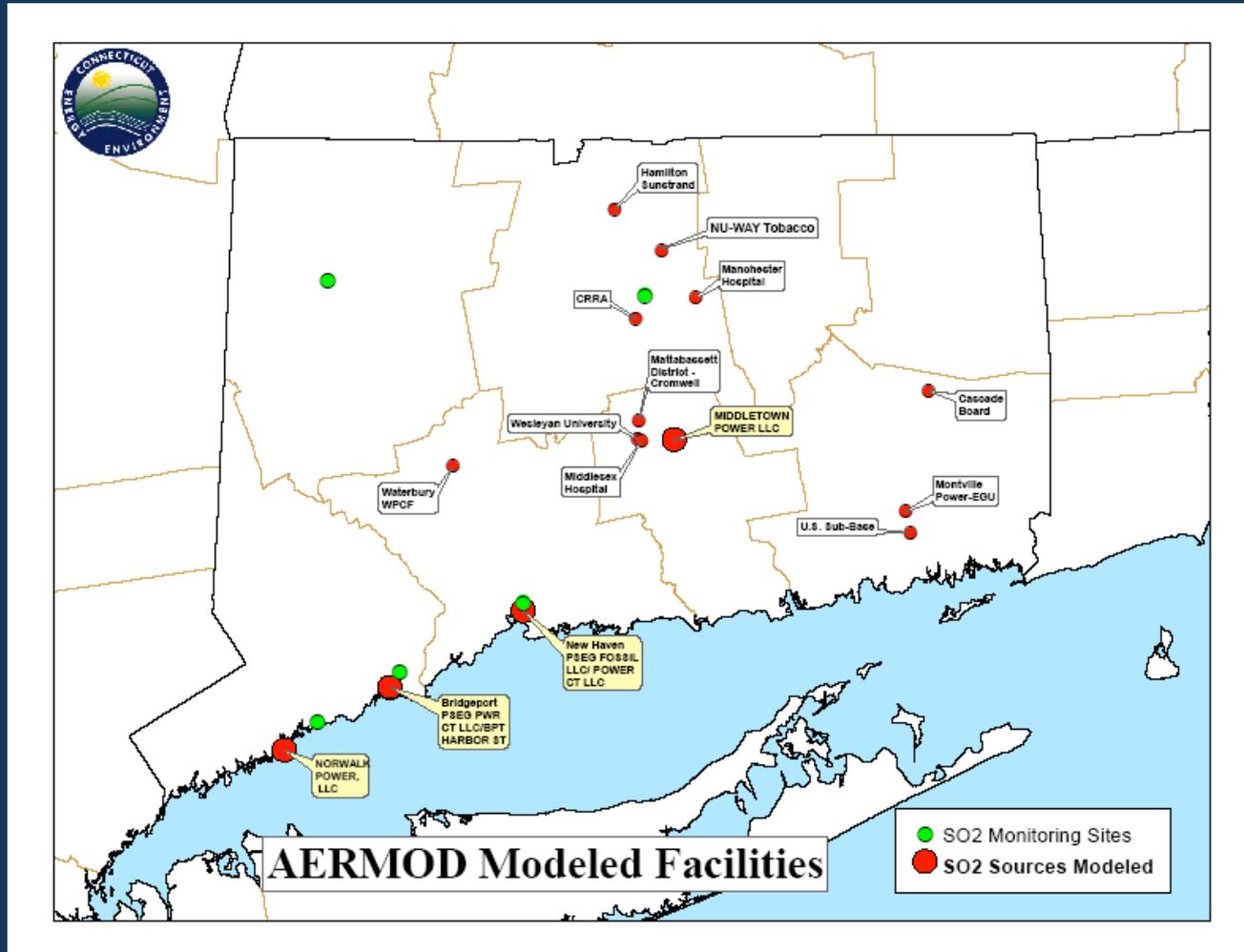
- Hybrid modeling and monitoring approach
 - Modeled facilities with > 100 tpy of actual SO₂ emissions
 - Attainment = monitored and modeled evidence of no violations
- Monitored ambient concentrations in compliance
- Modeled actual stack emissions shows compliance; however,
- Modeled allowable stack emissions shows impacts
 - Requires solution – enforceable strategy in SIP by June 2013



SO₂ Monitoring Sites

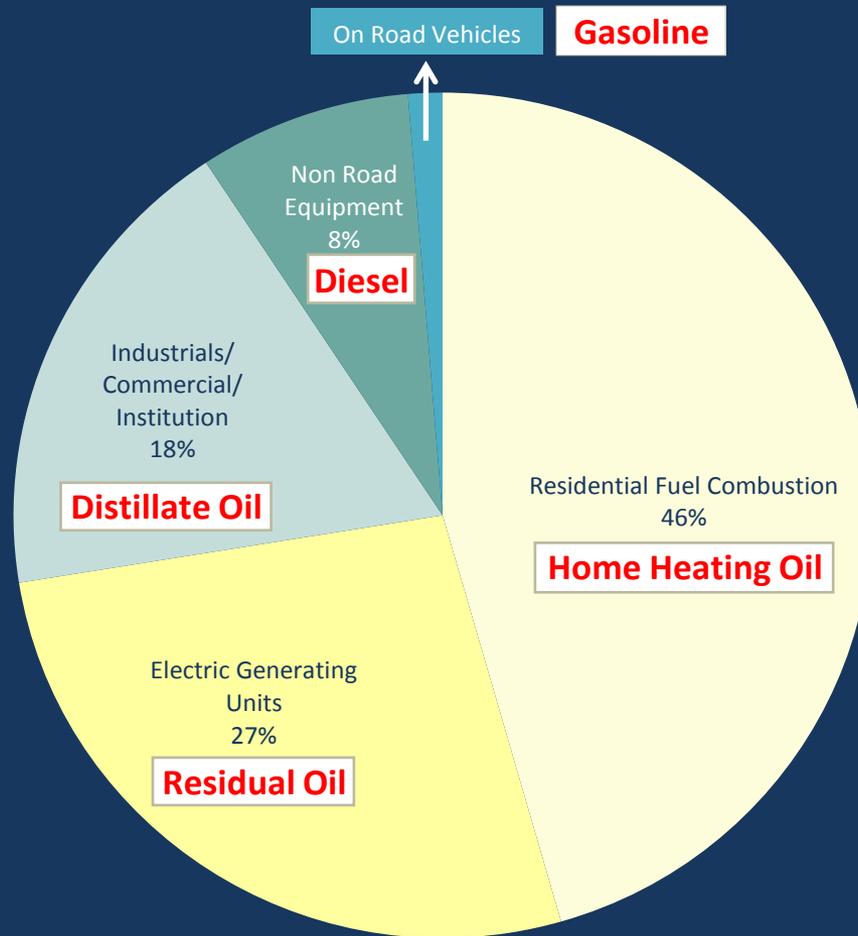


SO₂ Sources- Require Resolution



SO₂ Inventory

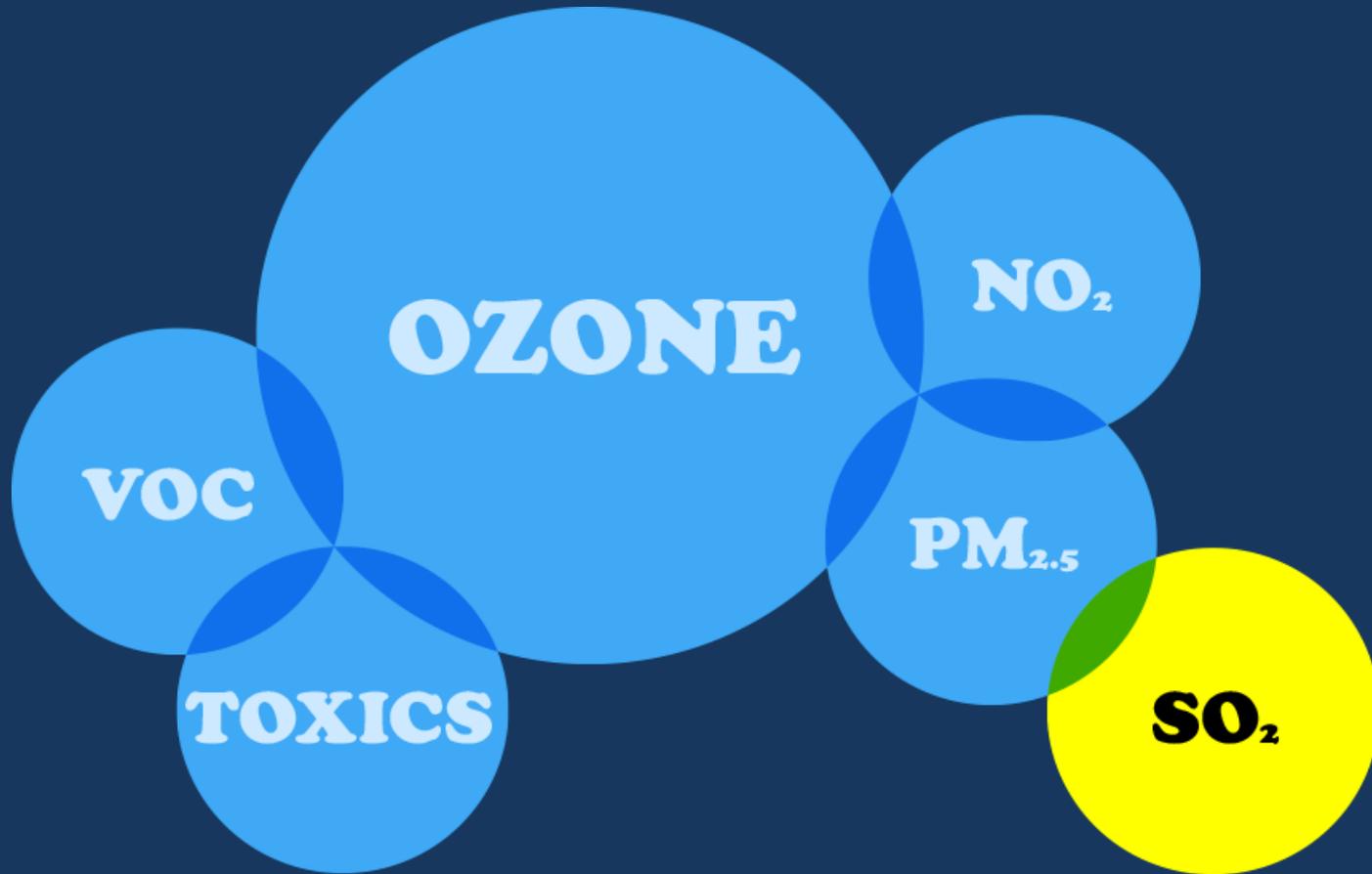
Connecticut SO₂ Inventory*



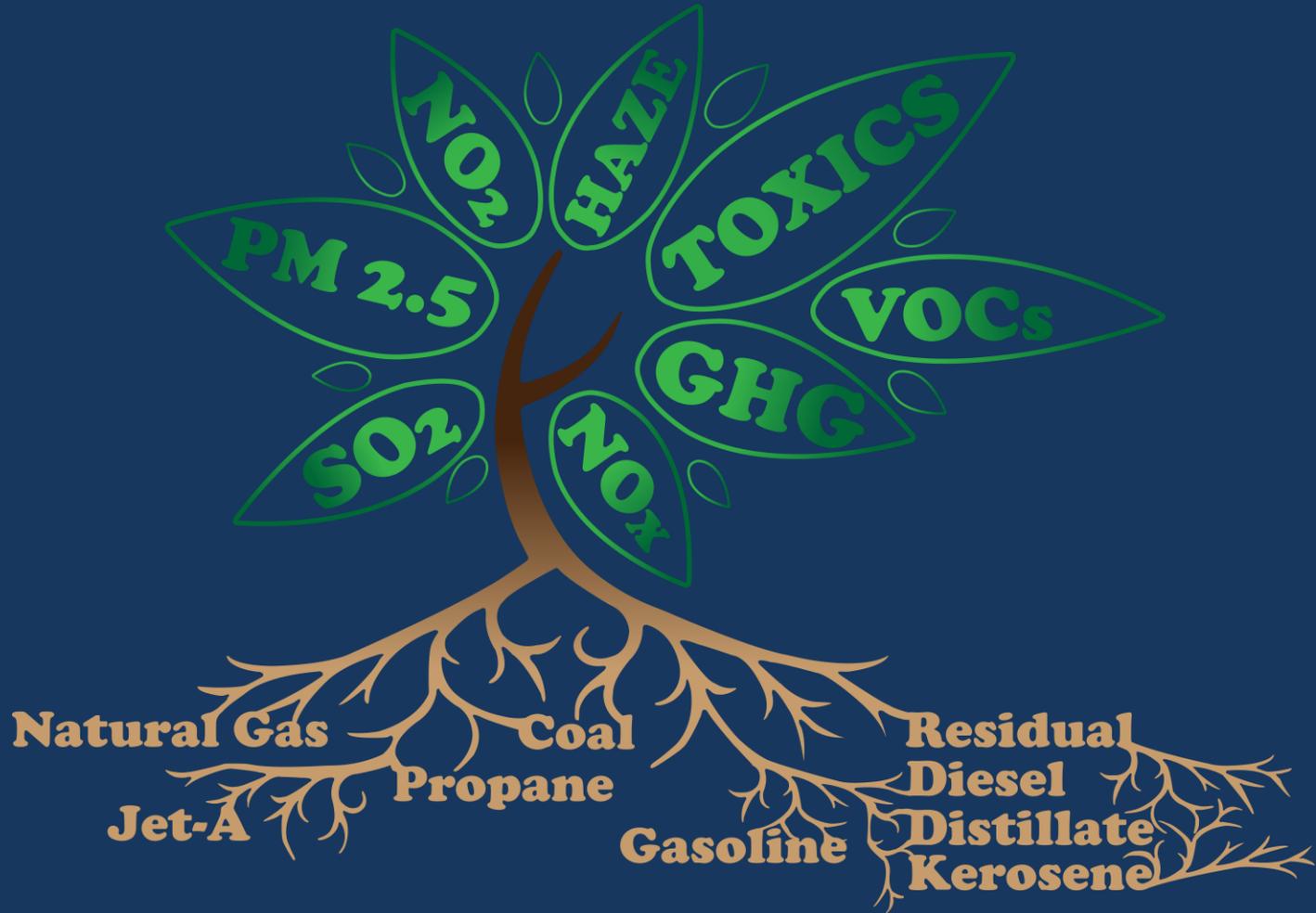
* 2007 Data



Air Planning: Multi Pollutant Co-benefits



Comprehensive Energy Plan – Clean & Efficient



Regulatory Action Needed

- Implement CGS 16a-21a
- Low sulfur fuels – Memorialize reality
 - Residual fuel – 3000 ppm
 - Distillate fuel – 15 ppm
 - Jet fuel used in stationary sources – 15 ppm
- Tier 3 – low sulfur gasoline, 10 ppm
- Address SO₂ transport



Complying with 1-hr Averaging Period

- Reasonable modeling
- Sources proactively modifying permits
- Leveraging comprehensive energy plan direction
- Implement Regional Haze commitments to lower sulfur in fuel



Next Steps

- Release low sulfur fuel draft regulations to SIPRAC
- Address specific issues of modeled source by reducing allowable emissions as necessary

