

Second Public Workshop

SF₆ Reductions in Non-Semiconductor and Non-Electric Utility Applications

**California Air Resources Board
Sacramento, CA**

September 29, 2008

Agenda

1:00 – 1:15 Introduction and background

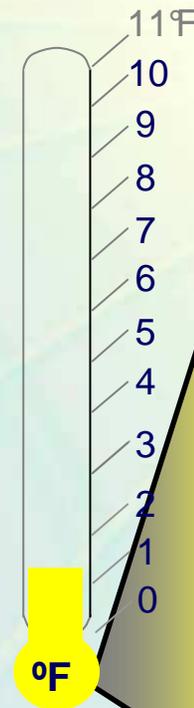
1:15 – 3:30 Overview of draft staff analysis and discussion

3:30 – 4:00 Next steps and closing remarks

Background

- **Climate Change Impacts on California**
- **California Global Warming Solutions Act of 2006 (AB 32)**
- **Sulfur Hexafluoride Overview**
- **Summary of Process to Date**

California Climate Impacts (over the past 100 years)



**1.3 °F higher
temperatures**

~7 inch sea level rise

**12% decrease in fraction
of runoff between
April and July**

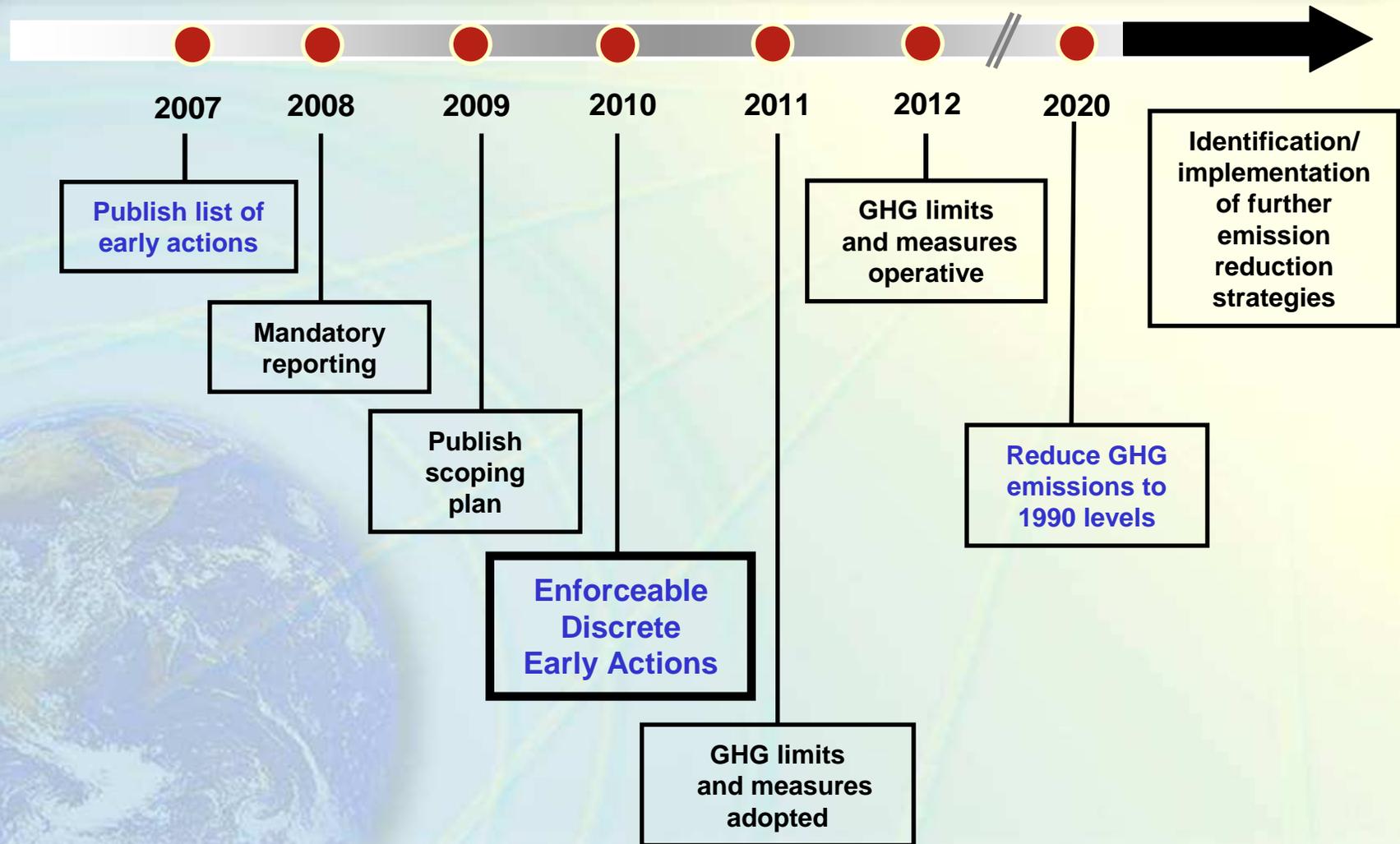
**Snowmelt and spring
blooms advanced 2
days/decade since 1955**

**4-fold increase in
wildfire frequency
(over 34 years)**

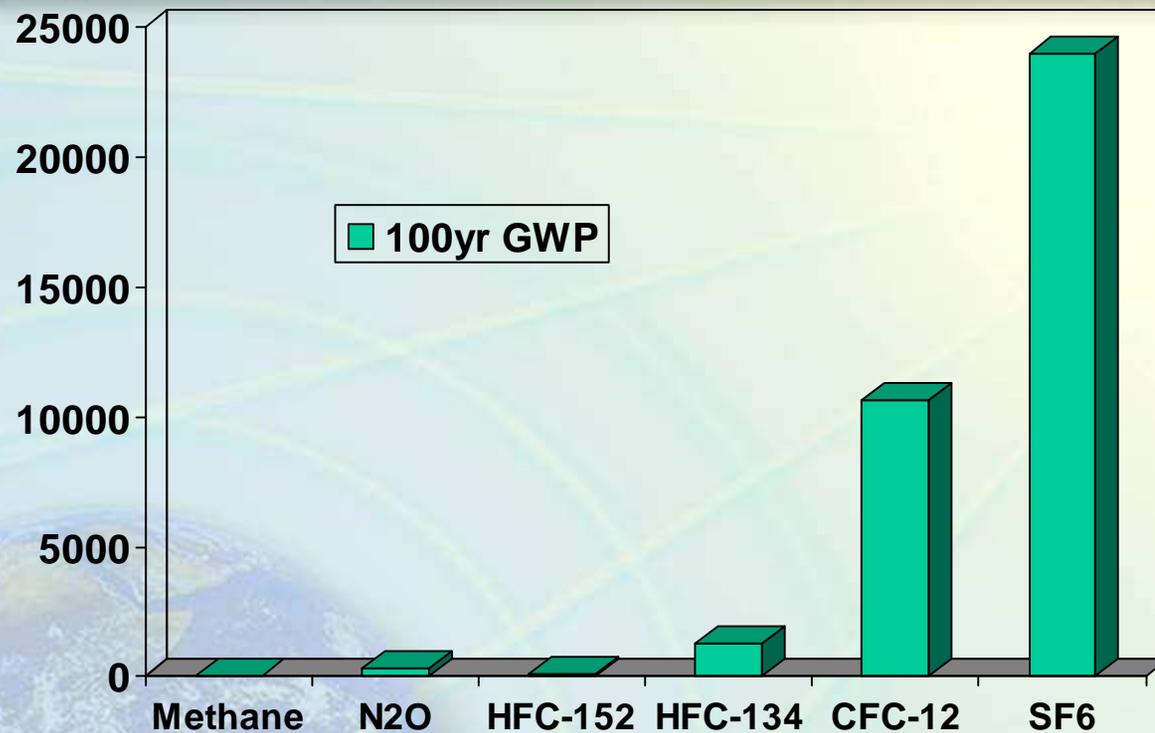
Cal/EPA-OEHHA, "Environmental Protection Indicators for California" (2002),
www.oehha.ca.gov/multimedia/epic/Epicreport.html

Westerling et al., "Warming and Earlier Spring Increase Western U.S. Forest Wildfire Activity", *Science* (2006)

California Global Warming Solutions Act of 2006 (AB 32)

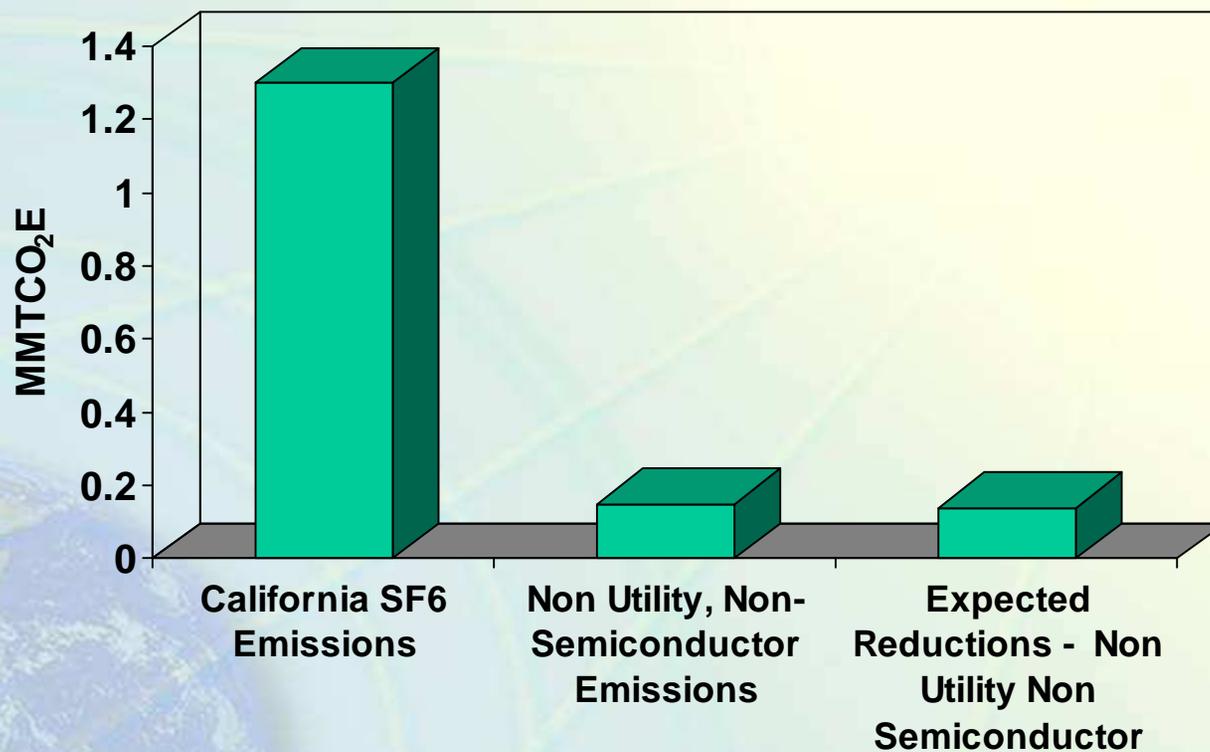


Sulfur Hexafluoride Overview



- **1lb SF₆ is equivalent to 10 tons CO₂ equivalent**
- **Atmospheric concentrations increasing approximately 5% per year**

Sulfur Hexafluoride Overview



2005 CA Inventory

Current best estimate

Non-Semiconductor and Non-Utility: Sources and Annual Emissions

- Magnesium casting ~ 0.05 MMTCO₂E
 - 4 companies in CA
- Tracer Gas Uses ~ 0.1 MMTCO₂E
 - Broad range of uses
- Medical ~0.00004 MMTCO₂E
 - Retinal Eye Surgery
- Other Unknown
 - Tennis balls
 - Recreational ('magic tricks')
 - *Electronics, Photovoltaics*
 - *Covered by Semiconductor EA*
 - *Particle Accelerators*
 - *Covered by Electric Utility EA*

Regulatory Process

- Identify Major Stakeholders
- Establish Working Group
- Stakeholder Consultation Meetings
- Develop Draft Proposal
- Conduct Public Workshops
- Release Staff Report (ISOR)
- Hearing Notice
- Board Hearing and Adoption
- Post Board Adoption Efforts
- Submitted to Office of Administrative Law

SF₆ Reductions in Non-Semiconductor and Non-Electric Utility Applications

Oct 2007	Board Approval
Feb 15, 2008	1 st Public Workshop
Mar 19, 2008	1 st Workgroup Meeting
May 28, 2008	2 nd Workgroup Meeting
Jul 2, 2008	Workgroup Update
Jul 30, 2008	2 nd Public Workshop

SF₆ Reductions in Non-Semiconductor and Non-Electric Utility Applications – Continued

Sep 29 th , 2008	3 rd Workshop
Oct 3 rd , 2008	Scoping Plan is released.
Oct 15 th , 2008	Comments due
Nov, 2008	Final Workgroup and Workshop meetings (if needed)
Dec, 2008	ISOR
Jan 22, 2009	Board Meeting

The slide features a background with a yellow-to-blue gradient. A horizontal blue bar is positioned at the top. In the bottom-left corner, there is a stylized globe of the Earth. The text "Questions ?" is centered on the slide.

Questions ?