



# AIR QUALITY OVERVIEW AND CALEEMOD TRAINING

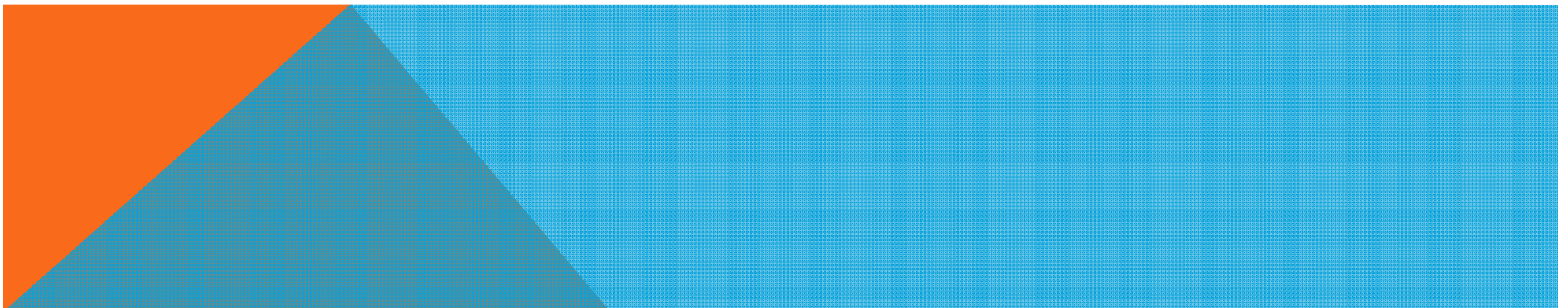
SAN LUIS OBISPO COUNTY AIR POLLUTION CONTROL DISTRICT

8/11/11

# TODAY'S TRAINING

- Icebreaker!
- Our mission & basic air quality concepts
- CEQA air quality impact analysis
  - Criteria pollutants (ROG, NO<sub>x</sub>, PM<sub>10</sub>)
  - Greenhouse gases
  - Toxics
- Introduction to the CalEEMod program

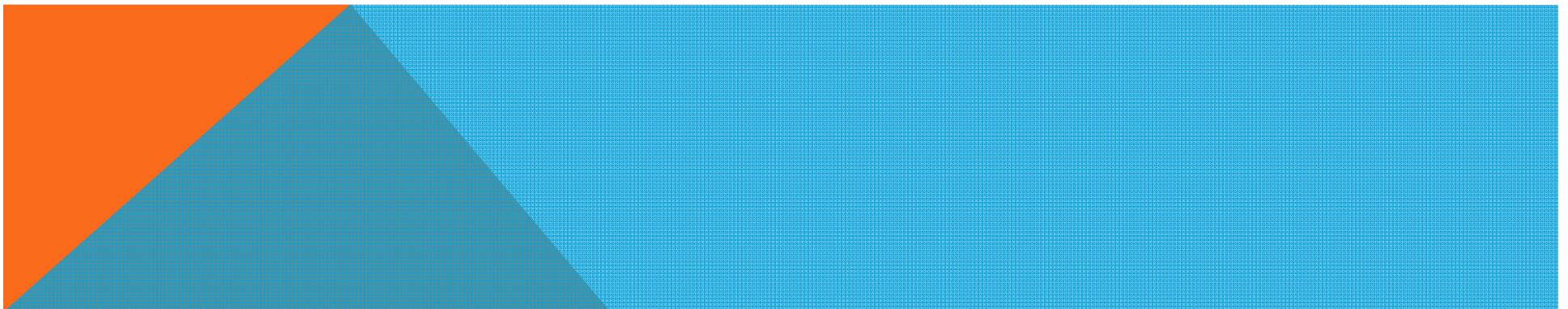
*Please feel free ask questions at any time! This is an informal training session and we will all benefit from the sharing of ideas and concerns*



**ICE BREAKER:**

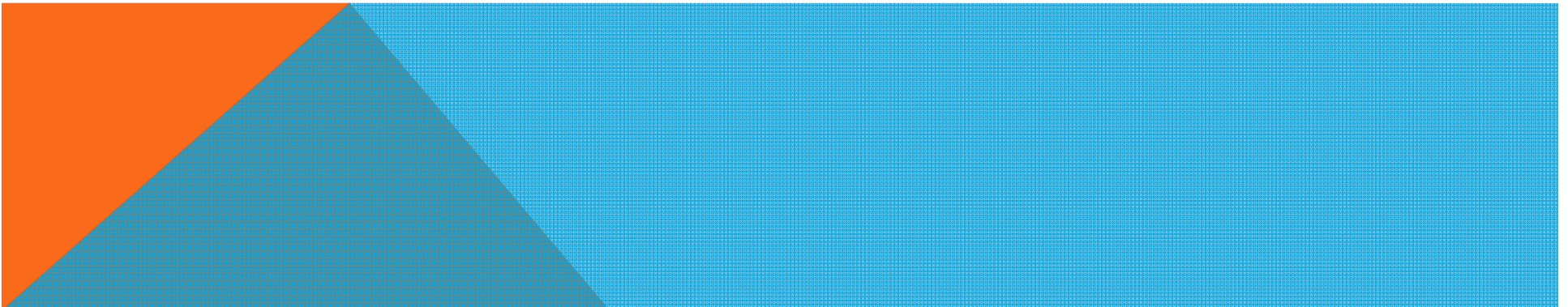
# Air Quality Jeopardy

Break up into teams -  
Winning team gets a prize!



# TYPES OF POLLUTANTS

- **Criteria pollutants**
  - Regulated under the Federal & California Clean Air Acts
  - Health-based standards
  - SLO County Air Quality:
    - nonattainment for State ozone, particulate matter standards
    - pending nonattainment for Federal 8-hour ozone standard
- **Toxic air contaminants (TACs)**
- **Greenhouse gases (GHG)**



# CEQA REVIEW – APCD’S FOCUS

2009 CEQA Handbook

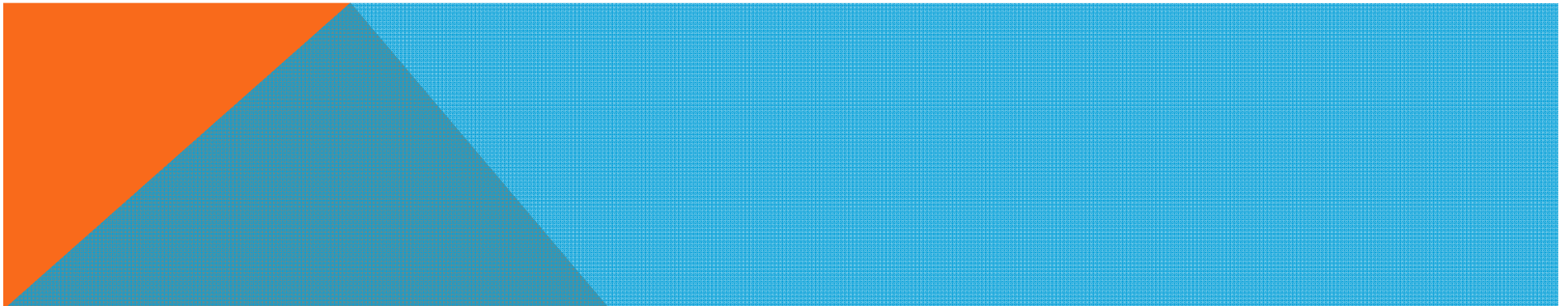
Construction & Operational Impacts

Residential, Commercial and Industrial Development

Permitted sources

- Gas stations
- Dry cleaners
- Wineries
- Oil and gas operations
- Contaminated soil clean-up
- Concrete batch plants

Special Conditions



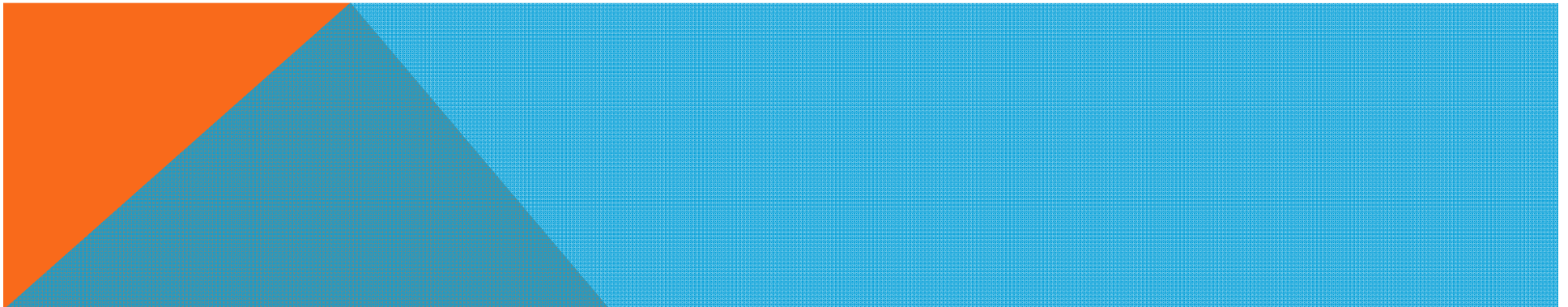
# STANDARD LANGUAGE & APPLICABLE RULES

## Standard Language for Construction & Operation (Handout)

- Asbestos
- Diesel Idling
- Sensitive Receptors

Rule 401 Visible Emissions

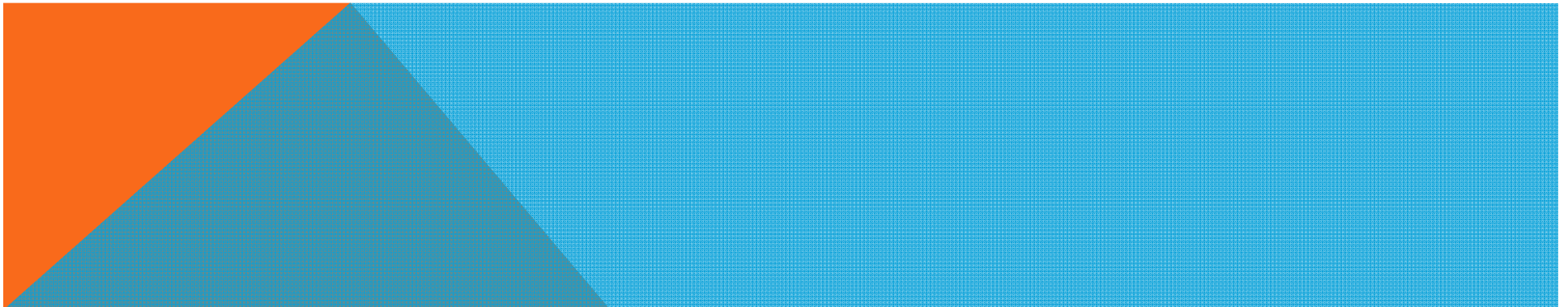
Rule 402 Nuisance



# AIR QUALITY THRESHOLDS - CONSTRUCTION

## Thresholds of Significance for Construction Operations

Pollutant	Threshold		
	Daily	Quarterly Tier 1	Quarterly Tier 2
ROG + NO <sub>x</sub> (combined)	137 lbs	2.5 tons	6.3 tons
Diesel Particulate Matter (DPM)	7 lbs	0.13 tons	0.32 tons
Fugitive Particulate Matter (PM <sub>10</sub> ), Dust		2.5 tons	
Greenhouse Gases (CO <sub>2</sub> , CH <sub>4</sub> )	Not Yet Established		



# AIR QUALITY THRESHOLDS - OPERATIONAL

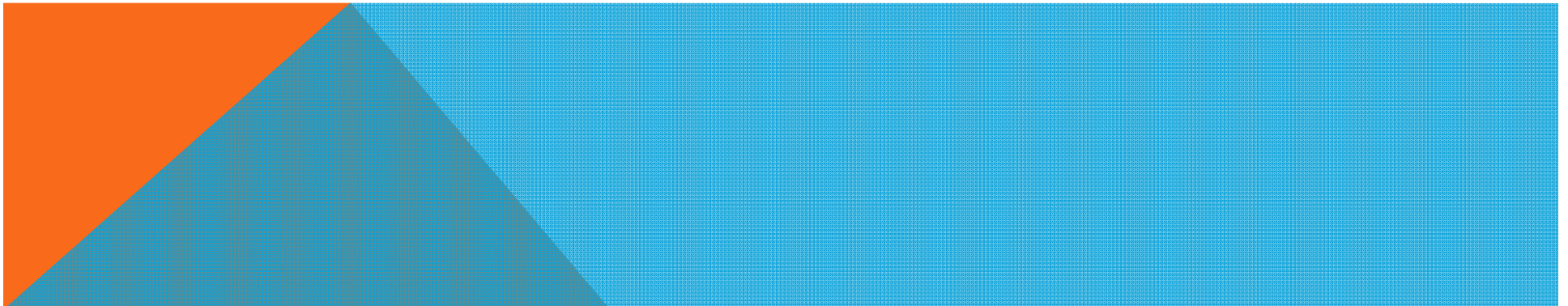
## Thresholds of Significance for Operational Emissions Impacts

Pollutant	Threshold	
	Daily	Annual
Ozone Precursors (ROG + NO <sub>x</sub> )	25 lbs/day	25 tons/year
Diesel Particulate Matter (DPM)	1.25 lbs/day	
Fugitive Particulate Matter (PM <sub>10</sub> ), Dust	25 lbs/day	25 tons/year
CO	550 lbs/day	
Greenhouse Gases (CO <sub>2</sub> e)	10,000 CO <sub>2</sub> e (interim industrial threshold)	

### HRA Excess Cancer Risk Threshold:

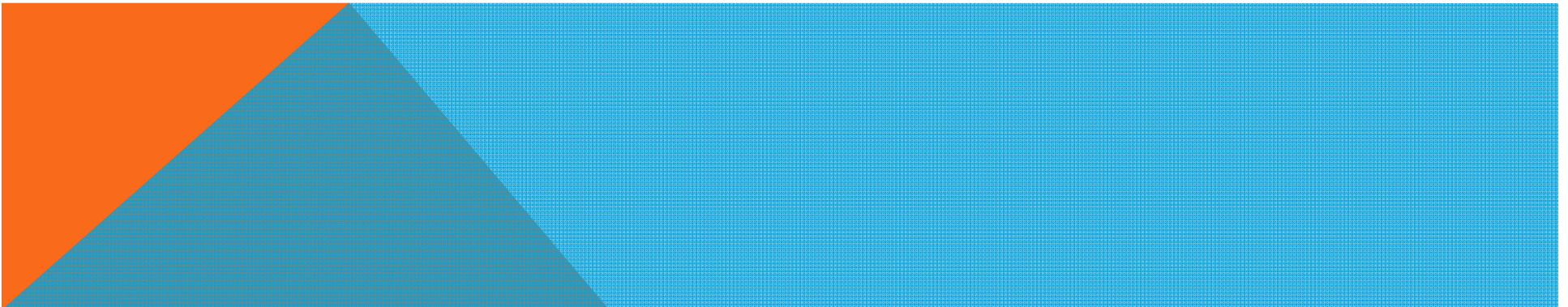
Type A – Proposed source near receptors – 10 in a million

Type B – Proposed receptors near source – 89 in a million



# AIR QUALITY ANALYSIS OF PROPOSED PROJECTS

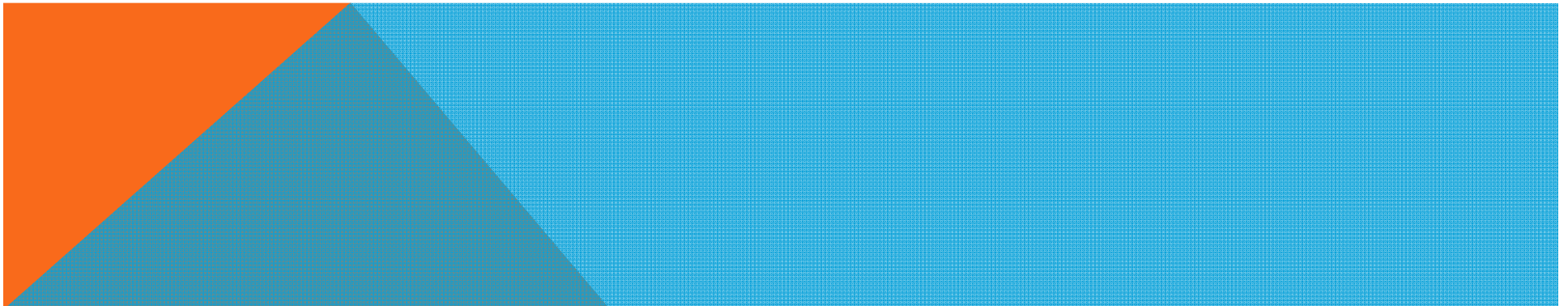
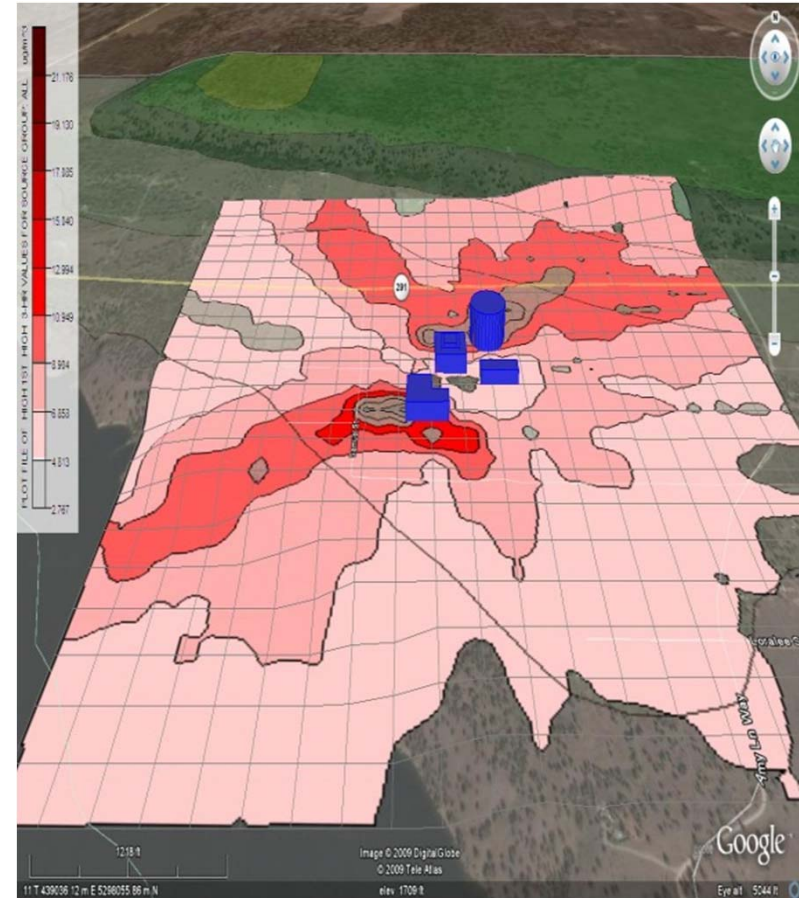
- **Quantify temporary construction emissions**
  - Exhaust emissions from on and off-road equipment based on default or user entered construction schedules
  - Fugitive dust emissions during grading
  - Reactive organic gas emissions from asphalt & painting
- **Quantify permanent operational emissions**
  - Emissions:
    - Motor vehicle emissions, toxics, energy use, engines, boilers, landscape, painting, wood burning devices
  - For projects w/ stationary sources– contact APCD early to determine permitting needs



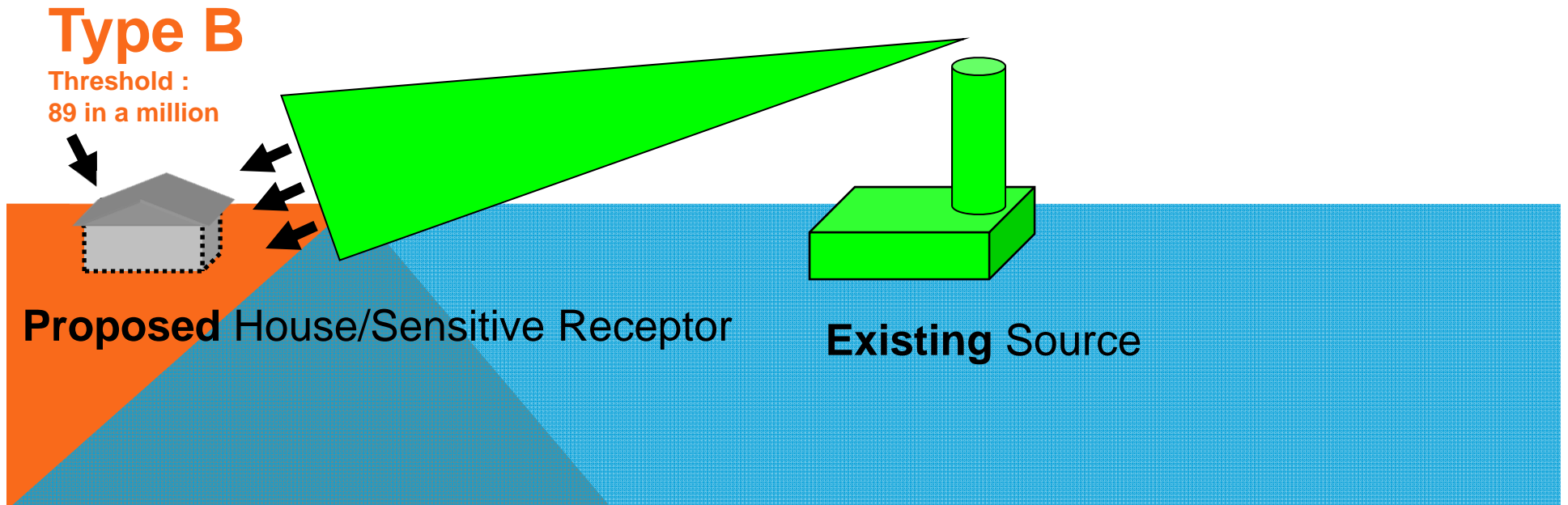
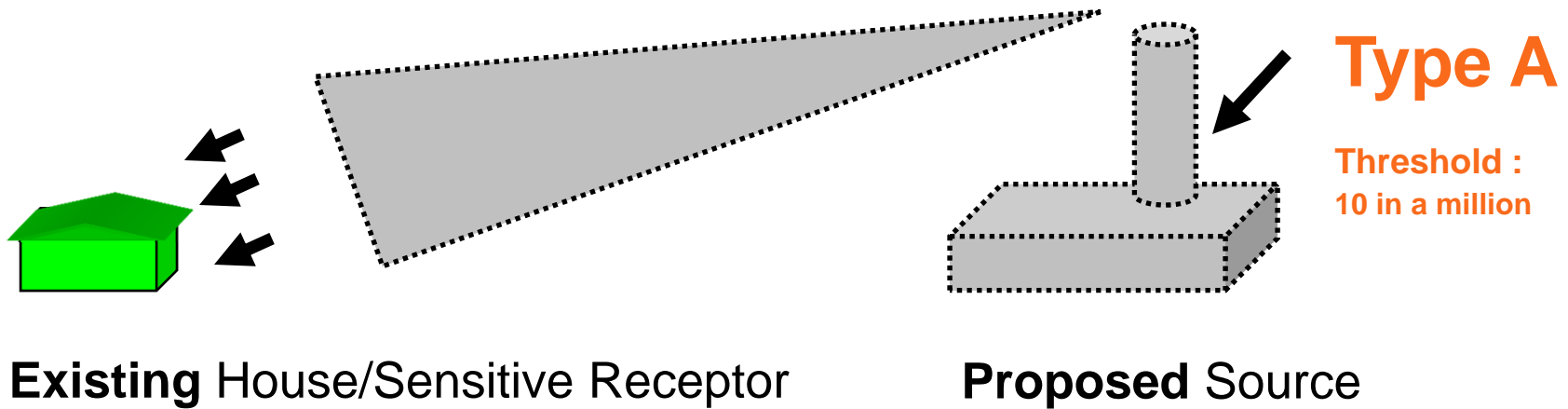
# HEALTH RISK ASSESSMENTS

*An assessment of the long-term potential excess cancer risk due to the proposed project.*

- **What can trigger the need for a HRA?**
  - Toxic sources near sensitive receptors
  - Diesel, roads, gas stations, dry cleaners
- **What is a sensitive receptor?**
  - People with increased sensitivity to air pollution
  - Residences, Schools, Day Care Centers
  - Hospitals, Nursing Homes, Parks, Playgrounds
- **Project Scenarios**
  - Type A – Proposed source near receptors
  - Type B – Proposed receptors near source



# TYPES OF PROJECTS ADDRESSED BY HRA



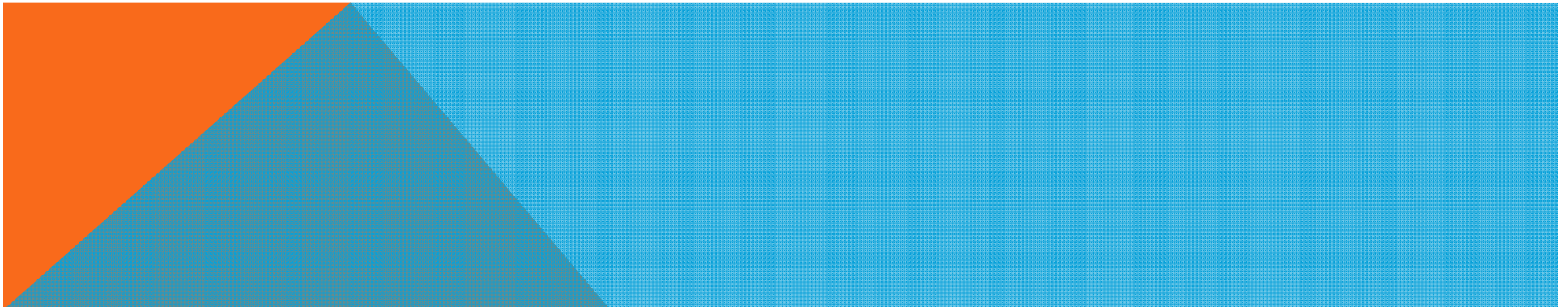
# HEALTH RISK ASSESSMENTS

- Assess risk in area within 1000 feet from the project property line
- Common scenarios that could create a potential increased health risk
  - A project that is close to a freeway (US 101) or high traffic roadways
  - Diesel truck travel and idling, diesel engines and standby generators
- HRA Types
  - Screening HRA – conservative estimate
  - Refined HRA – detailed estimate
- Screening HRA Tools
  - Spreadsheet for diesel engines, trucks
  - Lookup tables for roadway risk



# CEQA ANALYSIS FOR GREENHOUSE GAS EMISSIONS

- **Surveyed Air Districts throughout state on threshold approaches**
  - Following Bay Area approach with former BAAQMD lead planner as a consultant
- **Developing GHG thresholds for:**
  - stationary sources
  - residential and commercial projects
- **Three types of thresholds for flexibility:**
  - Numerical threshold (bright line via the gap analysis)
  - Efficiency threshold
  - Compliance with qualified GHG Reduction Plan/Climate Action Plan
- **Meetings and Public Workshops TBA**

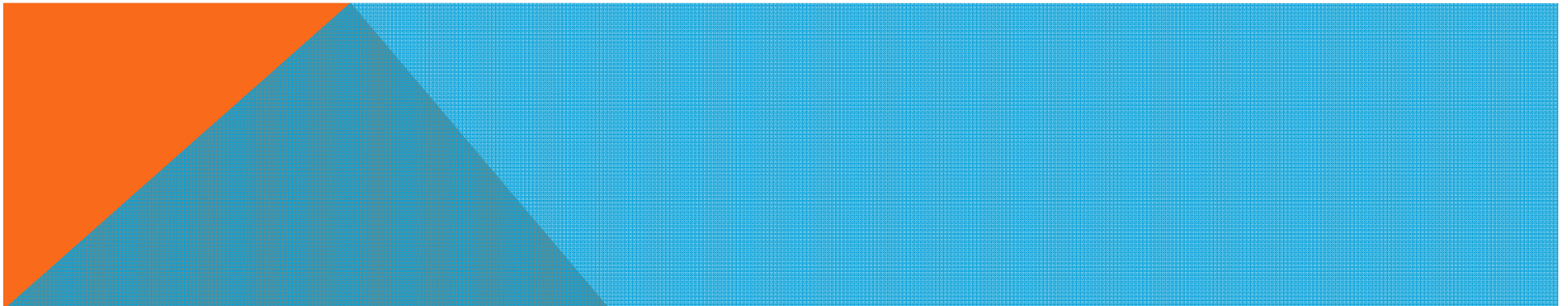


# CALEEMOD



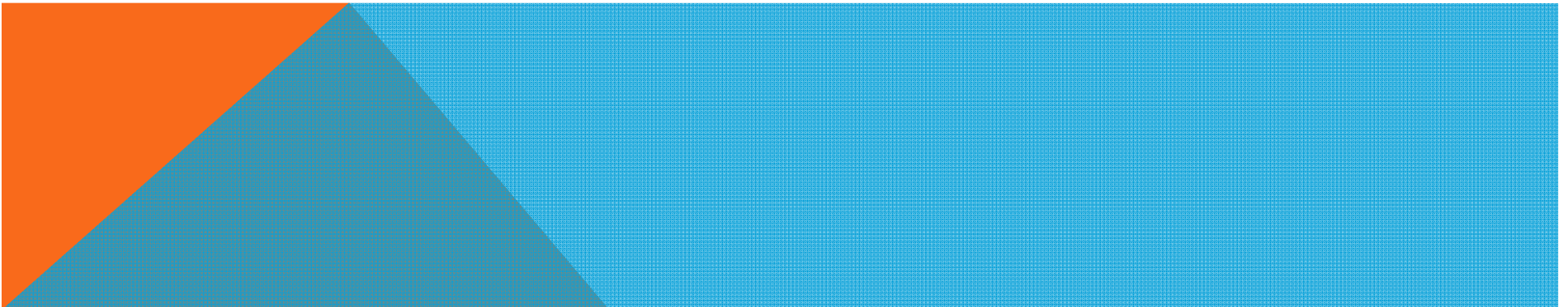
## New capabilities:

- Quantifies direct and indirect GHG emissions
  - GHG emissions from energy use, solid waste disposal, water use, vegetation planting and/or removal
- Includes two GHG pollutants in addition to CO<sub>2</sub>: methane and nitrous oxide
- Identifies mitigation measures to reduce criteria pollutant and GHG emissions and quantifies reductions
- Incorporates Pavley standards and Low Carbon Fuel standards into the mobile source emission factors



# BENEFITS OF CALEEMOD

- New features previously described
- Based on well-documented studies and data
- Local air district input for default values
- Ability to insert spreadsheet for large projects
- Default construction schedules more realistic
- Includes more land use types
  - Parking areas, warehouses, golf courses and swimming pools



# CALEEMOD CASE-STUDY DEMO...

