Air Quality Issues for Casinos

Operating Environment-friendly Gaming Facilities

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"Greening" Tribal Casinos Workshop

Wild Horse Pass, AZ

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Presentation Overview

- Potential Air Quality Issues
- Regulatory Landscape and Permitting
- Casino / Facility Landscape
- Green Opportunities and Alternatives

Potential Air Quality Issues at Casinos

- Dust at construction site
- Permit considerations
- Indoor air quality
- Greenhouse gas emissions

Regulatory Landscape and Permitting

Air Quality Framework

Federal	Tribal	Air Basin

- **Federal Clean Air Act Amendments1990**
  - Permits: *Pre-Construction, Operating*
  - Other programs include, but not limited to: *motor vehicles, air toxics, enforcement acid rain, stratospheric ozone, alternative fuels*

- **Air Basin or Region and Pollutants**
  - National Ambient Air Quality Standards (NAAQS)
  - Attainment, Nonattainment, or Unclassifiable
  - Criteria *(CO, NO_2, SO_2, VOC , PM , PM_{10}, $PM_{2.5}$, Pb)*
  - Non-criteria, Hazardous Air Pollutant (HAP)

Air Quality Framework

Federal	Tribal	Air Basin

- **Air permitting terms / acronyms are overwhelming…**
  - sources: *major, minor, new, existing, modified*
  - nonattainment *(e.g., extreme, severe, serious, moderate)*
  - new source review (NSR), nonattainment NSR
  - prevention of significant deterioration (PSD), Title V operating permit *(Part 71)*

<u>IMPORTANT TO NOTE</u>:

- EPA has a legal trust responsibility to tribes
- State and local agencies have no jurisdiction over tribal lands

Permitting Overview

- Permits often needed for construction and operation of casinos
- **Preconstruction permit** is essential for proposed casino (sets emissions limits and gives authorization to construct)
- **Title V Operating Permit** unites all Clean Air Act (CAA) requirements in a single document for a major source

Preconstruction Permit

- New casinos required to assess need for preconstruction permit (EPA can help)
- Depends on three factors:
  - Size of casino
  - Casino location
  - Potential air emissions based on operating hours (without and with air pollution controls)

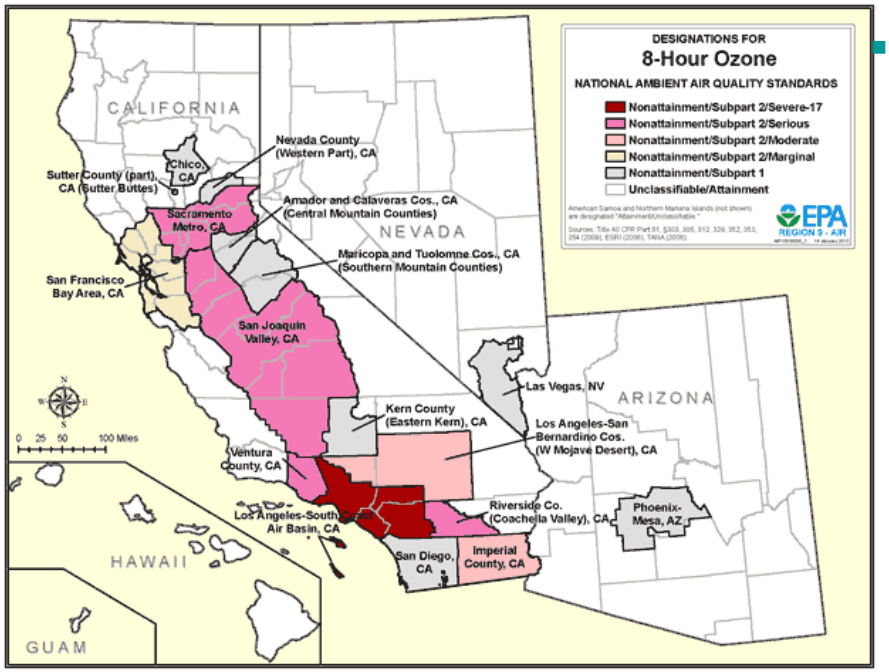
Preconstruction Permit *(cont.)*

- EPA needs 6-12 months to issue a final permit after a complete application has been submitted
- If required, construction on a new casino cannot begin without a preconstruction permit

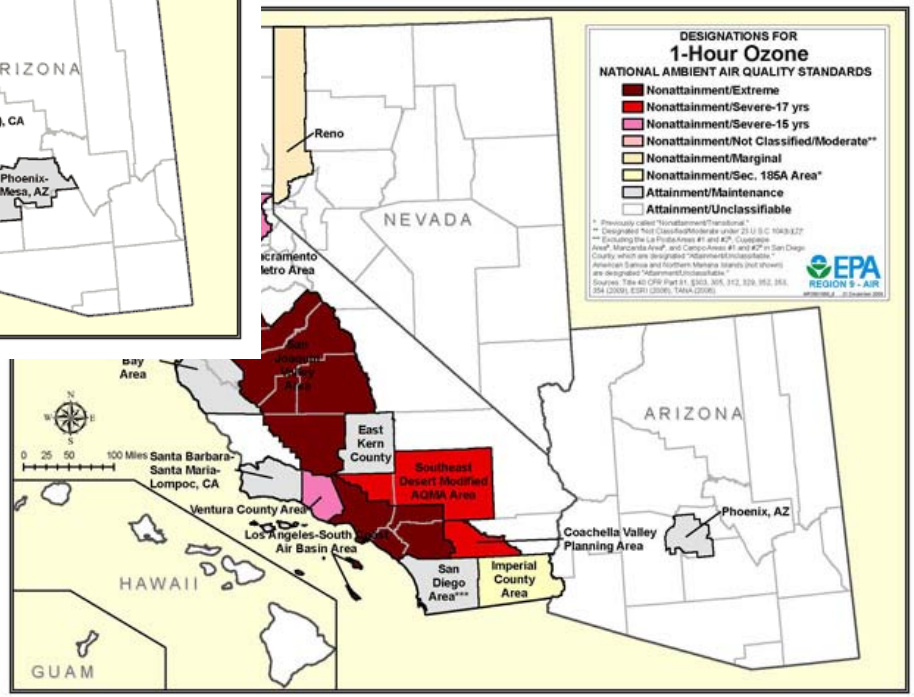
Preconstruction Permit *(cont.)*

- More likely to be needed in areas that do not meet the federal air quality standards (i.e. “nonattainment” areas) for a pollutant
- Many examples of nonattainment areas in California. In Arizona, mainly in Maricopa and Pinal Counties, however other counties in select areas for PM2.5

Ozone Nonattainment Areas

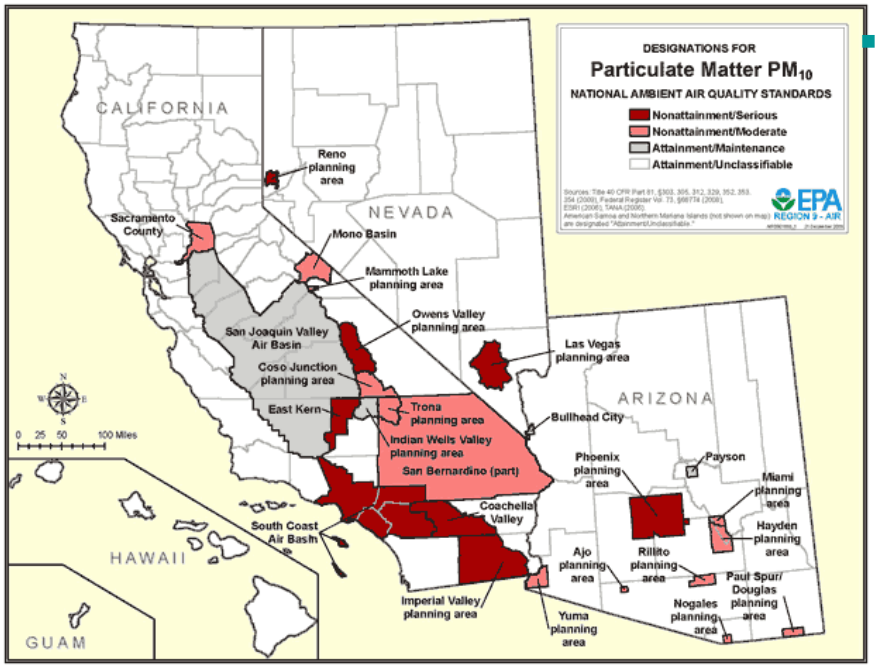


- 8-hour Ozone standard
- 1-hour Ozone standard

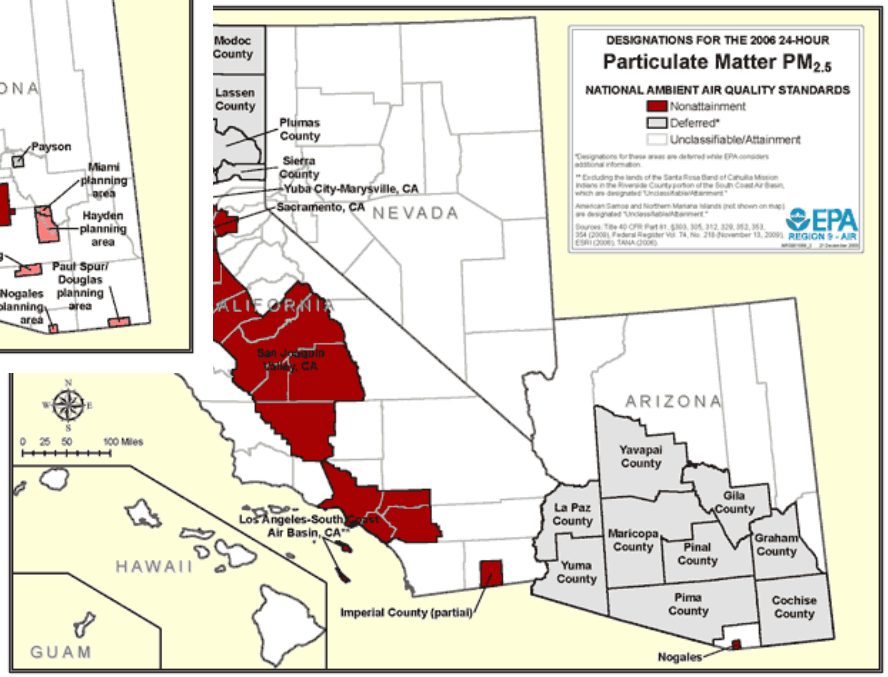


Reference: http://www.epa.gov/region09/air/maps/maps_top.html

PM10 & PM2.5 Nonattainment Areas



- PM10 nonattainment areas
  - PM2.5 nonattainment areas



Reference: http://www.epa.gov/region09/air/maps/maps_top.html

Title V Operating Permits

- Records in one document all air pollution control requirements that apply to a major source
- Outlines what is required to keep facility's air pollution under the legal limit – provides enforceability
- Most emissions from a casino will be by-products of combustion (boilers, engines) for generating electricity

Title V Operating Permits *(cont.)*

- If an existing casino has the potential to emit over a certain level of air pollution, a Title V permit is required
- Level of emission that triggers permitting depends on where casino is located
- See resource links for details

Status of Tribal NSR Rule

- Proposed rule fills the regulatory gap for permitting stationary sources on Tribal land
- Proposed 08/21/06
  - Federal Register Notice: 71 FR 4869
- On-going monthly Regional meetings
- Contact person: Laura McKelvey
  - 919-541-5497; mckelvey.laura@epa.gov

"to permit or not to permit …"

- Pre-construction permits are required BEFORE you construct - this includes construction of entirely new facilities, and expansions, additions, process changes and other modifications at existing facilities.

- After you obtain a permit, you must submit an application to EPA for a Title V Operating Permit (*Part 71 Permit*) within 12 months of commencing operations.

bottom line:

"when in doubt, seek us out"

Casino / Facility Landscape

Activities and air quality (AQ)

- guest comfort
  - heating, cooling
- facility operations and maintenance
  - power generation
  - emergency generators
  - landscaping
  - building upkeep
- fleet vehicles
- gasoline stations with vapor recovery and tanks
- activities off-site of casino operations
  - landfill, hospital, schools, wastewater treatments

- indoor air quality
- power generation, e.g. electricity and steam
  - emergency generators
  - non-emergency generators
  - boilers
  - gas turbines

Power Generation – *Electricity and Steam*

- emergency generators
  - diesel, *e.g.,* compression ignition engines
  - gas-fired, *e.g.,* spark-ignited engines
- non-emergency generators
  - used for other than conventional, emergency use
  - demand response programs
- other power generation
  - boilers
  - gas turbines

<u>consider for AQ permitting</u>

- location of equipment, e.g., nonattainment area
- size, e.g., horespower, kW or MW
- number of equipment in total
- operating hours, *e.g., emergency, full-time / base load, peak load time*

Indoor Air Quality in Casinos

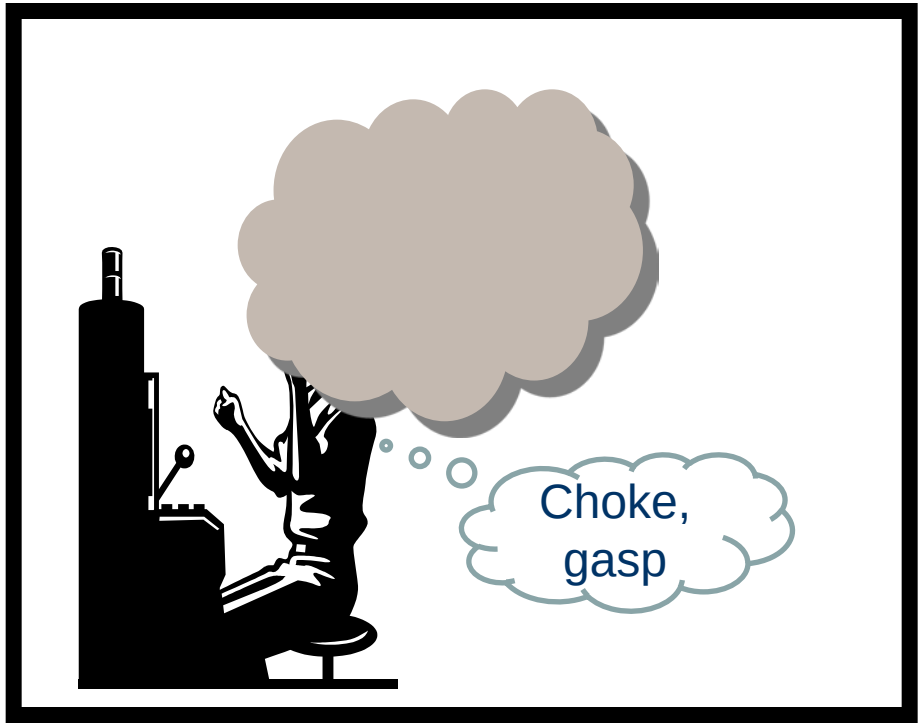
Environmental Tobacco Smoke

+

Ozone Generators

+

Cleaning Products



An unhealthy combination

Go Smoke Free!

- **There is <u>no risk-free level</u>** of exposure to tobacco smoke!
- **Second hand smoke** contains chemicals that cause cancer and breathing problems
- Going **smoke-free is the only way** to fully protect workers and customers
- **Other methods to reduce exposure**, such as separating smokers from nonsmokers, cleaning the air, and ventilating buildings, **cannot eliminate exposures** of nonsmokers to smoke.

Ozone Air Cleaners

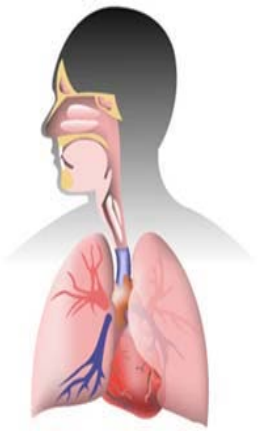
OZONE DOES **NOT** ELIMINATE HEALTH HAZARDS FROM CIGARETTE SMOKE!

ADDITIONALLY OZONE:

Damages…

- Rubber
- Fabric

AND… LUNGS!!!



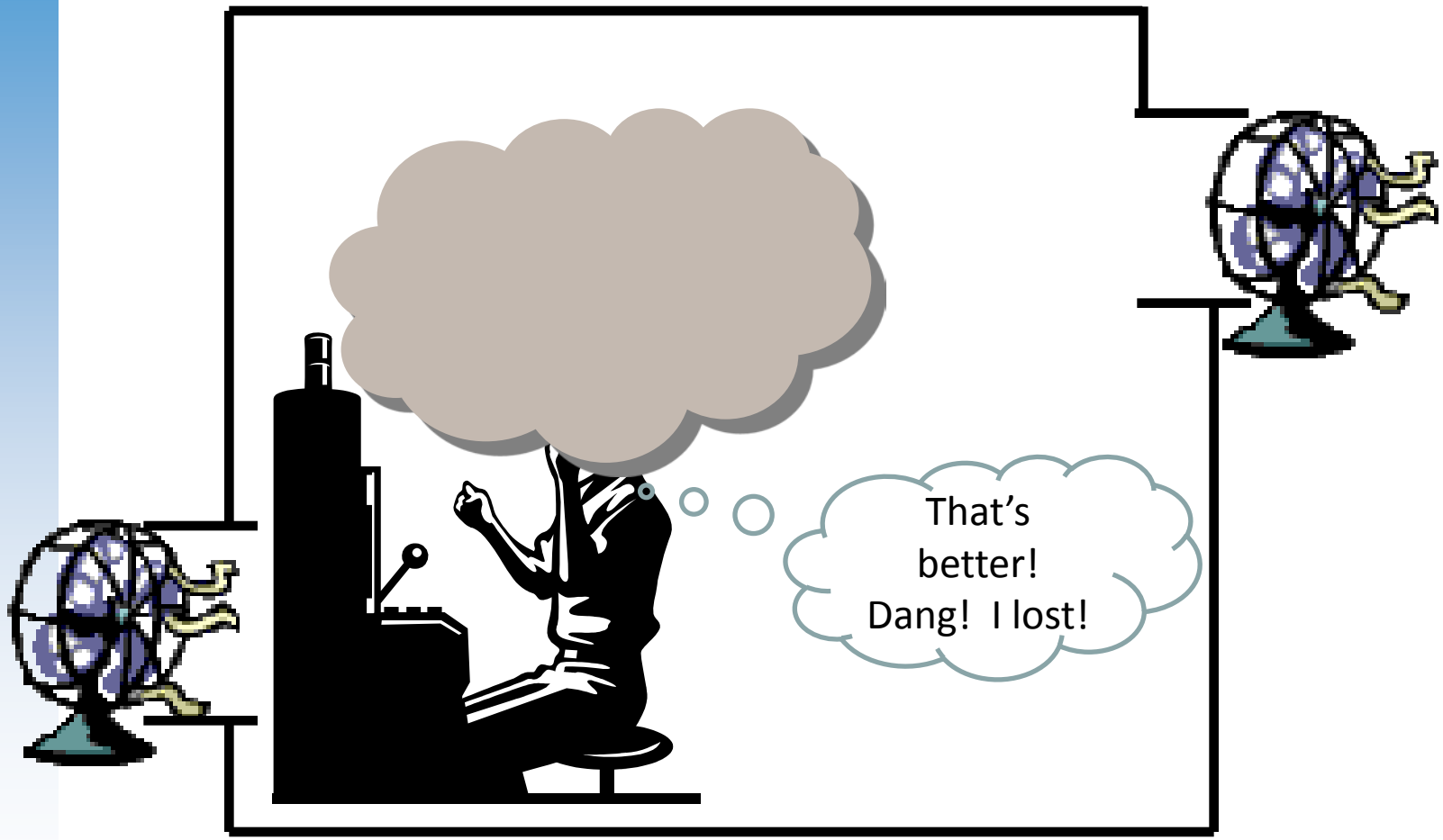
Reacts With…

Other compounds in the air, including from cleaning products

To Create…

Some of the same toxic compounds that are in tobacco smoke!

Eliminate Pollution – *Don't add to it!*



Green Opportunities and Alternatives

EPA Partnership Programs

- Several EPA Partnership Programs
  http://www.epa.gov/partners/

- Combined Heat and Power (CHP)
  http://www.epa.gov/chp/
  - Also referred to as cogeneration
  - Waste heat recovery, improve efficiency, on-site energy, reliability, economic benefits

- Hotel and Casinos –

  a Strategic Market of EPA's CHP Partnership

  http://www.epa.gov/chp/markets/casinos.html

EPA Air Quality Contacts

- R9 Indoor Air Quality
  - Kathleen Stewart
    415-947-4119
- R9 Air Permits
  - Gerardo Rios
    415-972-3974
- R9 Clean Energy and Climate Change
  - Ben Machol
    415-972-3770
- EPA's Combined Heat and Power Partnership Program
  - Neeharika Naik-Dhungel
    202-343-9553
  - Help-line
    703-373-8108

Questions?

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