

US EPA ARCHIVE DOCUMENT



# 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 Amendments 1990**
  - 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<sub>2</sub>, SO<sub>2</sub>, VOC, PM, PM<sub>10</sub>, PM<sub>2.5</sub>, 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*)

## **IMPORTANT TO NOTE:**

- 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.*)

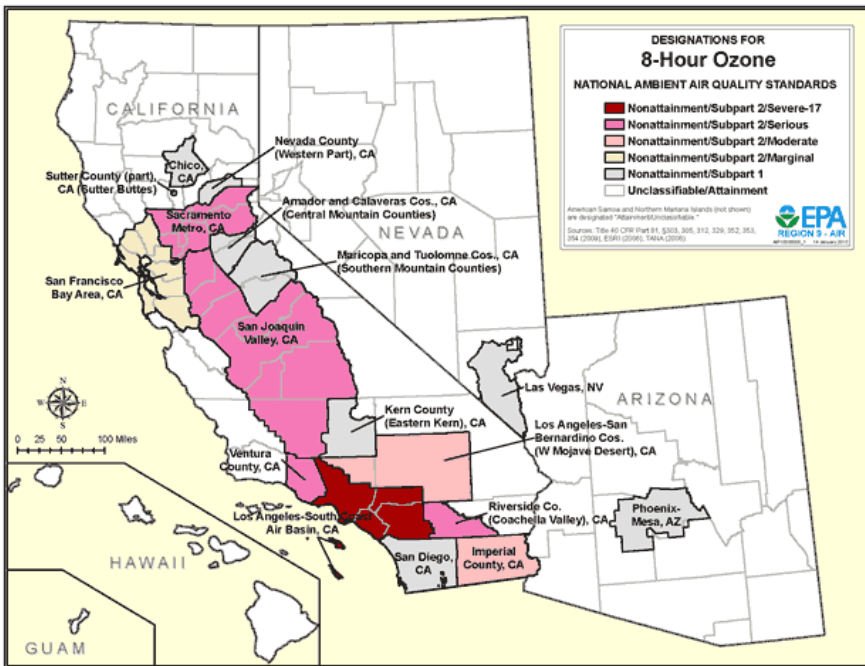
- EPA needs 6-12 months to issue a final permit after a complete application has been submitted
- If required, construction on a new casino cannot begin without a preconstruction permit



## Preconstruction Permit (*cont.*)

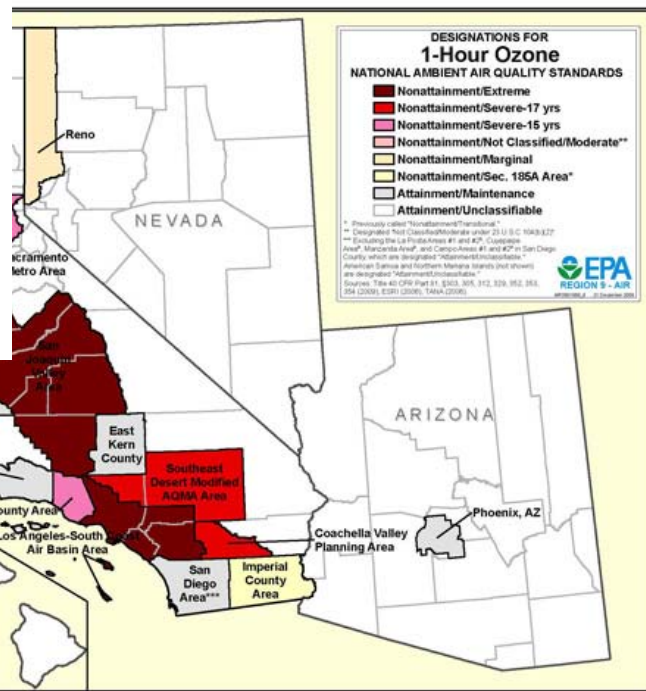
- More likely to be needed in areas that do not meet the federal air quality standards (i.e. “nonattainment” areas) for a pollutant
- Many examples of nonattainment areas in California. In Arizona, mainly in Maricopa and Pinal Counties, however other counties in select areas for PM<sub>2.5</sub>

# Ozone Nonattainment Areas



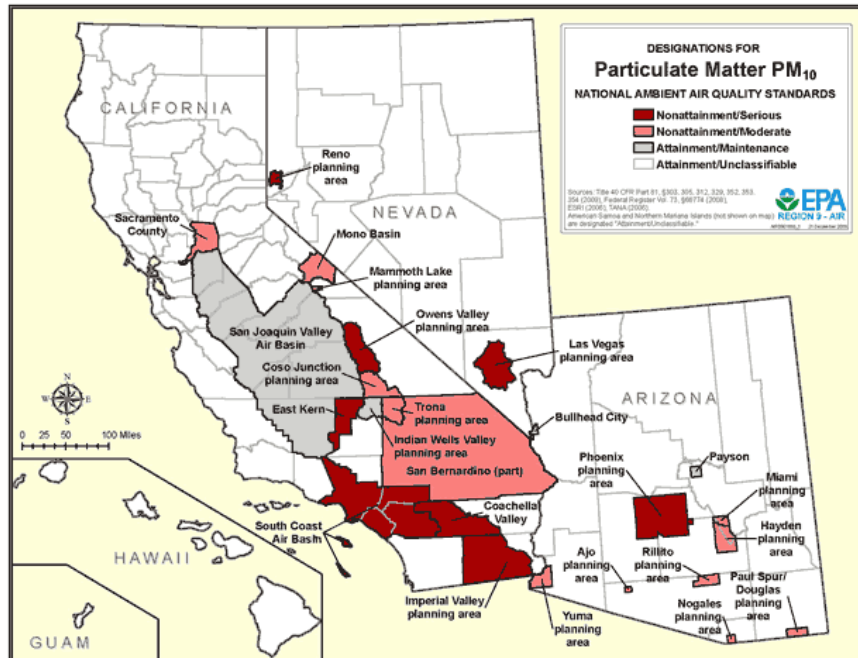
■ 8-hour Ozone standard

■ 1-hour Ozone standard



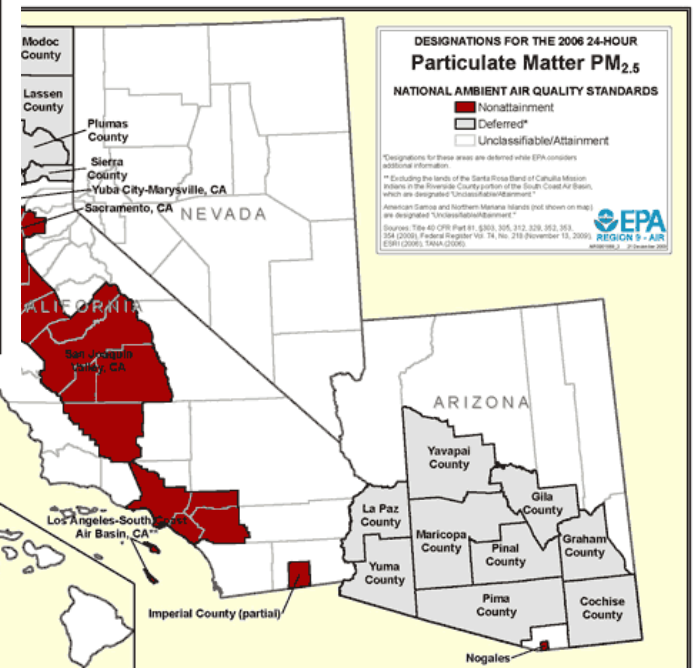
Reference: [http://www.epa.gov/region09/air/maps/maps\\_top.html](http://www.epa.gov/region09/air/maps/maps_top.html)

# PM10 & PM2.5 Nonattainment Areas



- PM10 nonattainment areas

- PM2.5 nonattainment areas



Reference: [http://www.epa.gov/region09/air/maps/maps\\_top.html](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](mailto: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”***

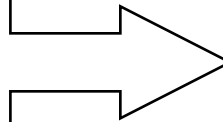


# *Casino / Facility Landscape*

# 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

## consider for AQ permitting

- location of equipment, e.g., nonattainment area
- size, e.g., horsepower, 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



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An unhealthy combination



# Go Smoke Free!

- There is **no risk-free level** 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

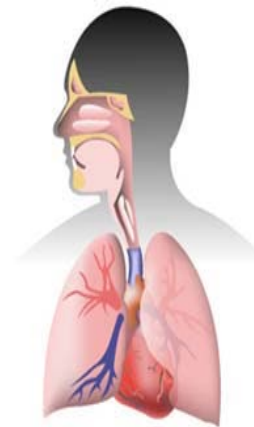
OZONE DOES **NOT** ELIMINATE HEALTH HAZARDS FROM CIGARETTE SMOKE!

## 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

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- R9 Air Permits
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  - Neeharika Naik-Dhungel  
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# Questions?



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