

PERMITTING CONSIDERATIONS FOR BIOMASS ENERGY FACILITIES

Biomass Utilization Workshop
Auburn, CA
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Benefits of Biomass Power

- Renewable Energy
- Domestic Source of Energy
- Healthy Forests/Reduce Wildfire Danger
- Air Quality Benefits
- Greenhouse Gas Reduction
- Promoted by Federal, State, and even
Local Policy

DO THESE BENEFITS IMPROVE THE PERMITTING SITUATION?

Yes



and No



Potential Environmental Issues

- Air Quality
- Water Use & Discharge
- Land Use
- Transportation
- Biological Resources
- Noise
- Cultural Resources
- Visual/Aesthetics

*Focus
today is
on the
first 3*

Biomass Power and Air Quality Issues



Air Quality Permitting for Biomass Power

- Principal air pollutants of concern:
 - NO_x (ozone precursor)
 - PM
 - VOC (ozone precursor)
 - CO
 - HAPs (particularly HCl)
- Size of plant and associated emissions critical

Which one are you building?

This one?



or this one?



- Major Source
- or*
- Minor Source

BIOMASS POWER AND WATER QUALITY ISSUES



Water Quality Permitting for Biomass Power

- Water Use
- Water and Wastewater Discharge
 - Non-contact cooling water
 - Waste water
- Storm Water
 - Construction
 - Operation
 - Storm Water Pollution Prevention Plan

Biomass Power and Land Use Issues

“Brownfield”



“Greenfield”

Land Use Permitting for Biomass Power

- Siting and Land Use
- Zoning
- Conditional or Special Use Permits
- Community Acceptance

The 4 P's in Permitting

- ✓ Planning
- ✓ Perception
- ✓ Perseverance
- ✓ Patience

Regulatory Agency Rapport

- ✓ Framing the biomass project and its positive attributes
- ✓ Pre-application discussions
- ✓ Understanding the system and the regulatory necessities
- ✓ Developing permitting & compliance strategies



CALIFORNIA

The ~~Good~~, the Bad, and the Ugly

California as a National Leader in Renewable Energy



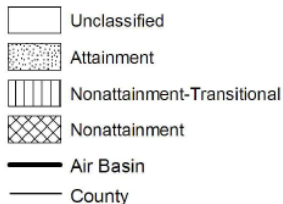
but also



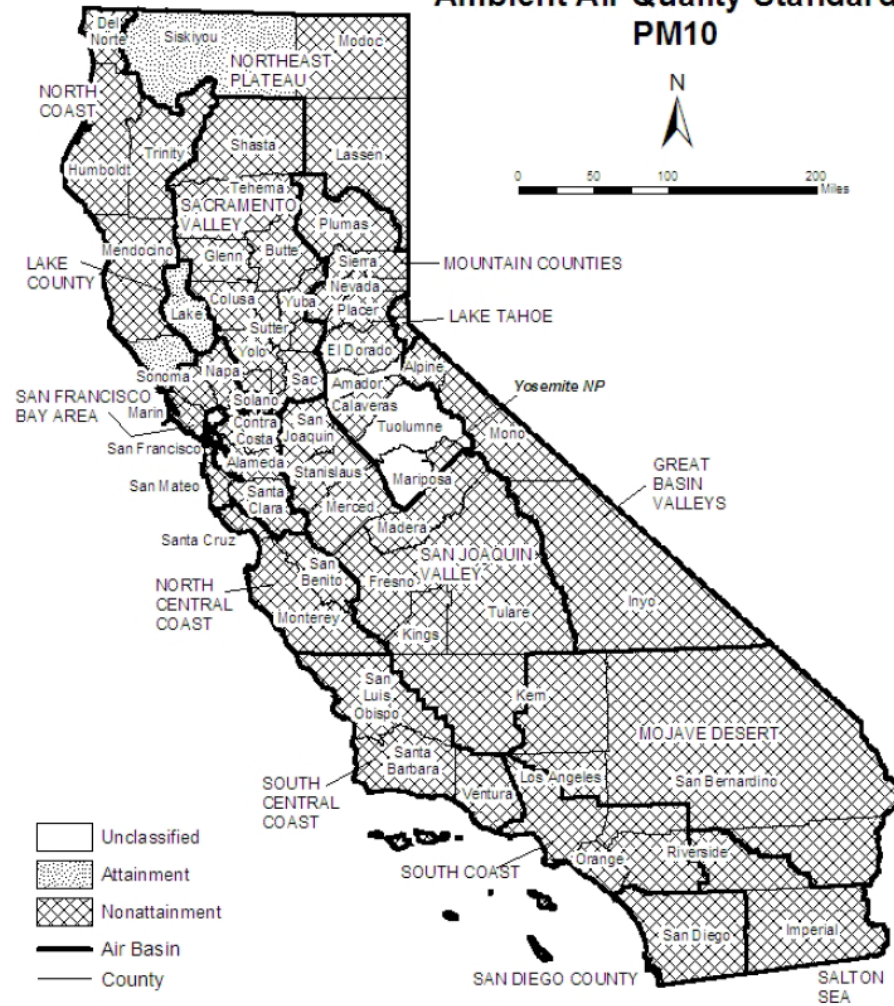
Regulatory Complexity, Uncertainty,
and Confusion

CA Air Quality Permitting

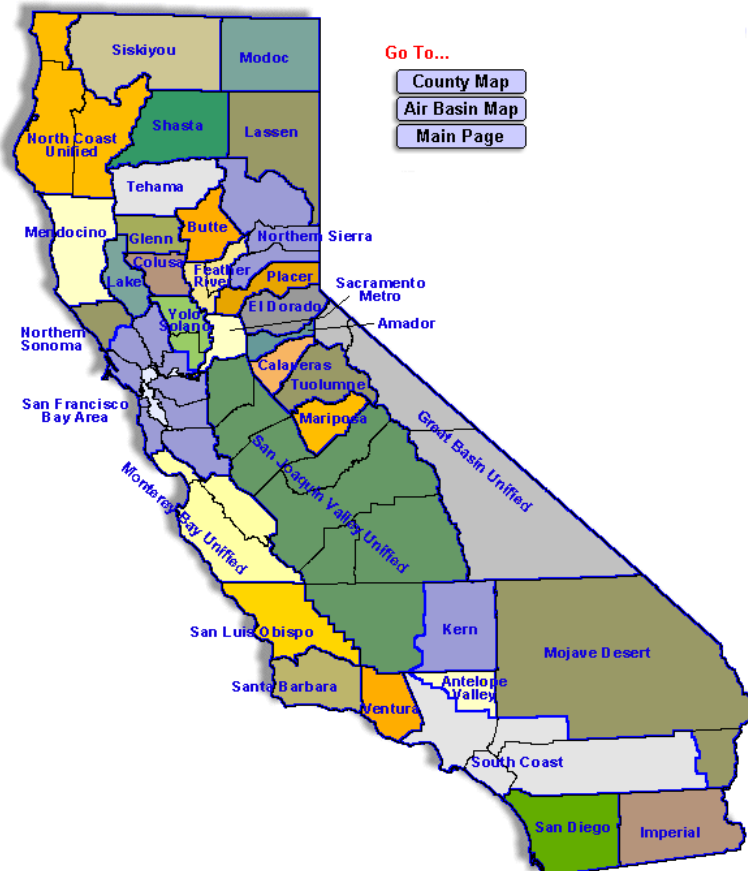
- High order of complexity due to:
 - Air quality constraints
 - 35 separate air districts
 - Voluminous regulations at state and district levels



2006
Area Designations for State
Ambient Air Quality Standards
PM10



California Air Districts



Air Quality Constraints

- Many of the CA Air Districts are in non-attainment for NO_x and PM
- Attainment v. Non-attainment
- Emissions controls particularly important in CA
- Need for offset emissions – are they available and at what cost?

The California Process

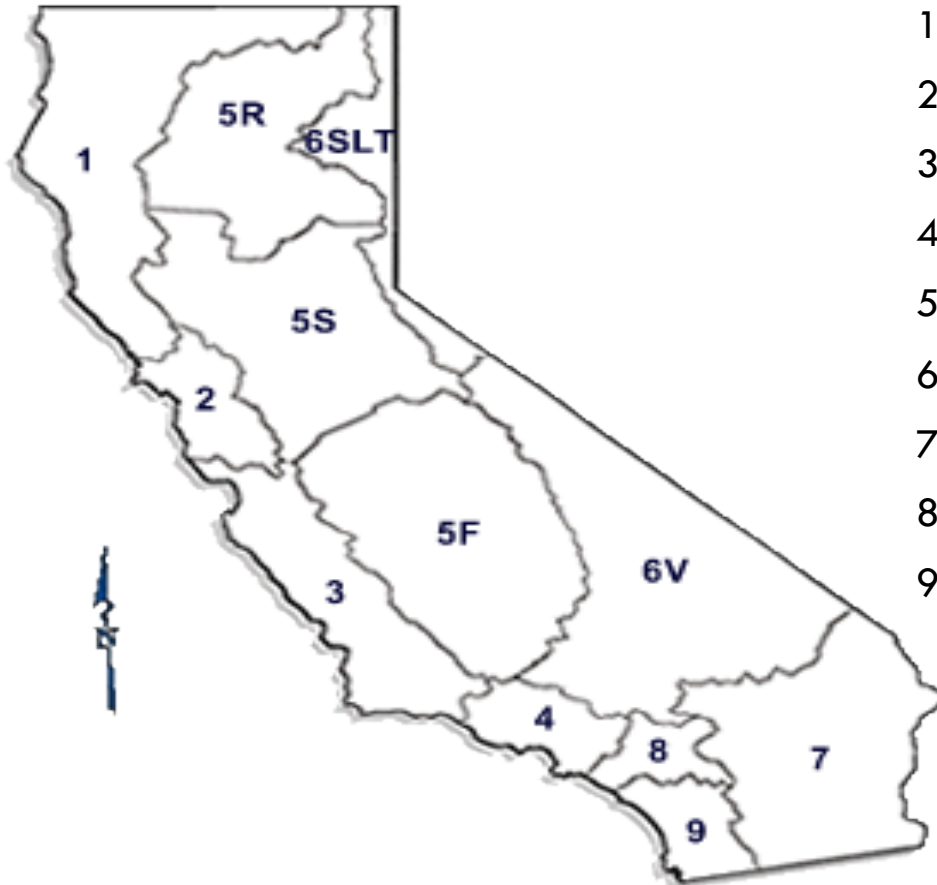
- District-specific rules and emission rules
- Authority to Construct
- Permit to Operate
- Title V Permit (major sources)

CA Water Quality Permitting

- Water use
 - Generally local agencies
- Wastewater Discharge
 - Regional Board
- Storm Water
 - State Board



CA Regional Water Quality Control Boards



- 1 – North Coast
- 2 – San Francisco Bay
- 3 – Central Coast
- 4 – Los Angeles
- 5 – Central Valley
- 6 – Lahontan
- 7 – Colorado River Basin
- 8 – Santa Ana
- 9 – San Diego

CA Land Use

- Siting
- Zoning Conformance
- Condition Use Permits
- Community Acceptance
- California Environmental Quality Act

CEQA!

- CEQA – The California Environmental Quality Act
- Purpose – to inform the public of environmental decisions by CA agencies
- Public process driven
- For biomass power plants usually led by land use or air quality agencies

Land Use Permits & Zoning

- County or City Planning/Community Development Department
- Zoning must be Industrial (or need for zoning change)
- Conditional Use Permits usually needed

Remember

The 4 P's in Permitting

- ✓ Planning
- ✓ Perception
- ✓ Perseverance
- ✓ Patience

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