

# PERMITTING CONSIDERATIONS FOR BIOMASS ENERGY FACILITIES

Biomass Utilization Workshop  
Sonora, California  
May 22, 2008



## Benefits of Biomass Power

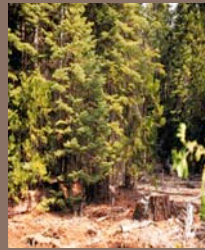
- Renewable Energy
- Domestic Source of Energy
- Healthy Forests/Reduce Wildfire Danger
- Air Quality Benefits
- Greenhouse Gas Reduction
- Promoted by Federal, State, and even Local Policy



# DO THESE BENEFITS IMPROVE THE PERMITTING SITUATION?

3

Yes



and No



## Potential Environmental Issues

4

- 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

6

- Principal air pollutants of concern:
  - NO<sub>x</sub> (ozone precursor)
  - PM
  - VOC (ozone precursor)
  - CO
  - HAPs (particularly HCl)
  
- Size of plant and associated emissions critical



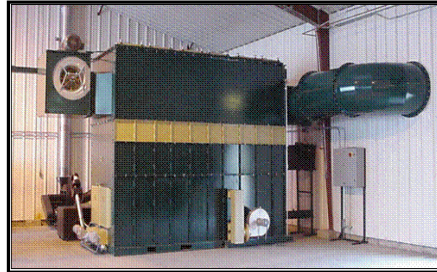
# Which one are you building?

7

This one?



or this one?



- Major Source
- or*
- Minor Source



8

## BIOMASS POWER AND WATER QUALITY ISSUES



## Water Quality Permitting for Biomass Power

9

- 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

10

“Brownfield”



“Greenfield”



## Land Use Permitting for Biomass Power

11

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



## The 4 P's in Permitting

12

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



# Regulatory Agency Rapport

13

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



14



## 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  
OZONE



2006  
Area Designations for State  
Ambient Air Quality Standards  
PM10





## Air Quality Constraints

- Many of the CA Air Districts are in non-attainment for NO<sub>x</sub> 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

21

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



# CA Water Quality Permitting

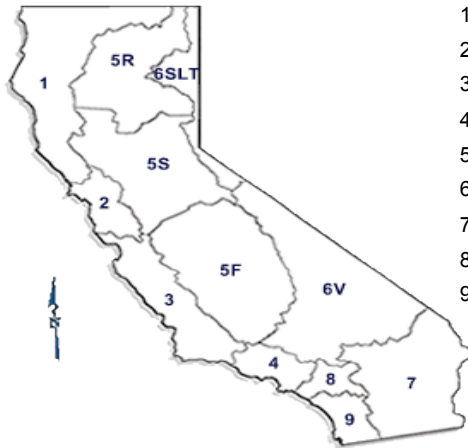
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- Water use
  - Generally local agencies
- Wastewater Discharge
  - Regional Board
- Storm Water
  - State Board



## CA Regional Water Quality Control Boards

23



- 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

24

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



# CEQA!

25

- 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



## Basic CEQA Components

26

- Environmental Information Form
- Environmental Checklist & Initial Study
- CEQA Determination
  - Exempted
  - Negative Declaration
  - Mitigated Declaration
  - Focused EIR
  - Full EIR



# Land Use Permits & Zoning

27

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



28



## FEDERAL & TRIBAL



## Federal Agencies/Tribal Entities vs. State and Local Control

29

- Federal Land Management Agencies
- Environmental Protection Agency
- May use local/state standards
- Tribal Environmental Department



## Remember

30

### The 4 P's in Permitting

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





Tad Mason, CEO  
TSS Consultants  
2724 Kilgore Road  
Rancho Cordova, CA 95670  
916.638.8811 x 112  
[tmason@tssconsultants.com](mailto:tmason@tssconsultants.com)  
[www.tssconsultants.com](http://www.tssconsultants.com)