

California Biosolids Regulatory Trends, Local Ordinances & Outlook

CWEA Specialty Conference

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January 27, 2010

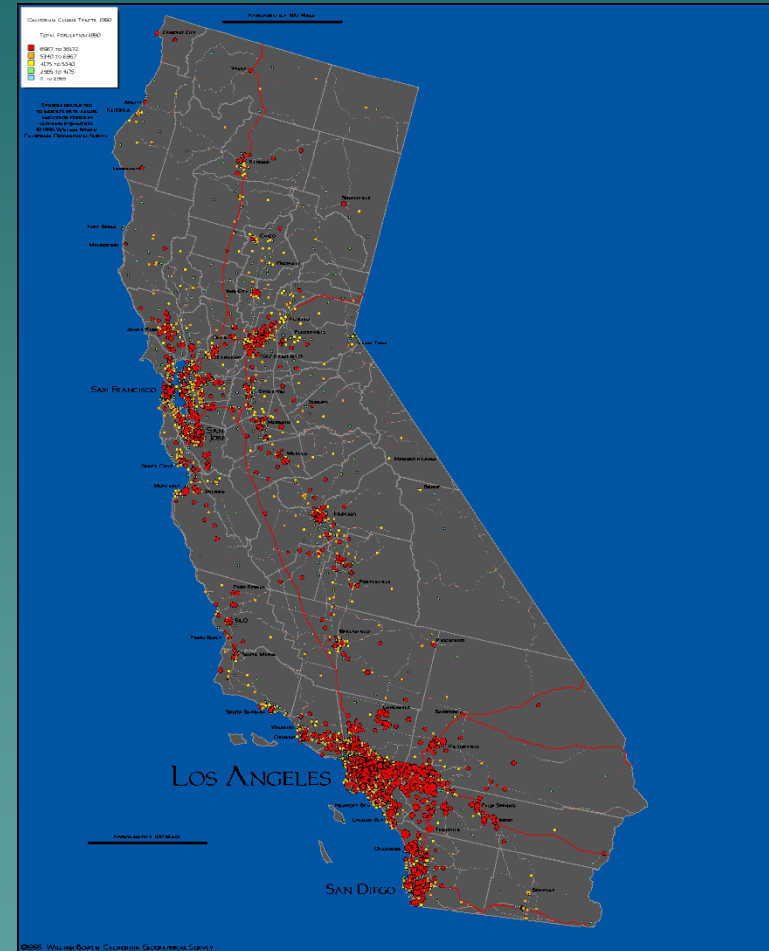
San Francisco, CA

Presentation Overview

- ▼ Biosolids generation
 - ▼ How biosolids are regulated
 - ▼ Current biosolids management
 - ▼ Challenges to current practices and management
 - ▼ What does the future look like?
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- A decorative graphic at the bottom of the slide consisting of a silhouette of a mountain range in shades of teal, extending from the right side towards the center.

Where Do Biosolids Come From?

- ▶ 36 million people
- ▶ Generated each and every day
- ▶ 750,000 dry tons/year



Regulatory Setting

Federal



State



Local District
and County



How are Biosolids Regulated?

- ▼ Federal – 40 Code of Federal Regulations Part 503 (Part 503) US EPA & EPA Region IX
 - ▼ State Water Resources Control Board General Order
 - ▼ California Integrated Waste Management Board (CalRecycle)
 - ▼ Arizona Department of Environmental Quality
 - ▼ Regional Water Quality Control Board Waste Discharge Requirements
 - ▼ County Ordinances
 - ▼ Air District Regulations
- 


What Do We Do With Biosolids?



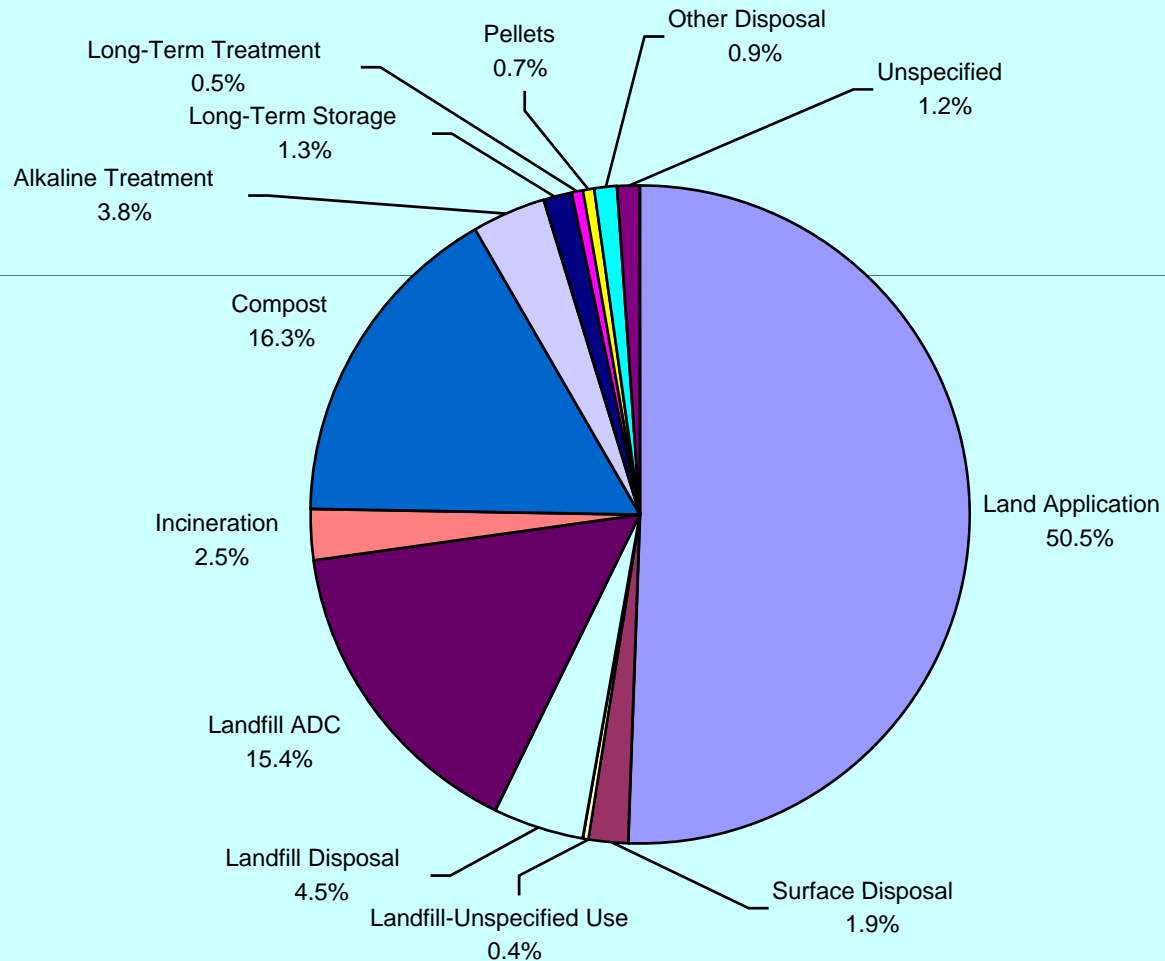
Beneficial Uses

- ▼ Soil Amendment – direct land application
- ▼ Compost – bulk and consumer
- ▼ Pellets - bulk
- ▼ Landfill cover (ADC) and disposal
- ▼ Energy
 - Thermal Conversion
 - Deep well injection

Biosolids Management Goals

- ▼ Manage California's biosolids responsibly
 - ▼ Maintain environmental and public health benefits
 - ▼ Recycle
 - ▼ Ensure sustainability
 - ▼ Maintain access to multiple options
 - ▼ Consider rate payers
- 

Biosolids Management and Capacities - California



Challenges for Landfill ADC/ Disposal




ADC/Landfill Beneficial Reuse: General Trends

- ▶ Increasing urbanization – property closer to landfills
- ▶ Increasing public opposition to landfill expansion
- ▶ Increasing public opposition to use of biosolids as ADC
- ▶ Concern over VOC emissions from landfills
- ▶ Concern over use of compostable material in landfills

Regulations - ADC

- ▼ SJVAPCD 4565: Air board restrictions eliminate the use of cake biosolids as ADC
- ▼ Alameda County: Potential to add fees to organic materials sent to landfill, even if used as ADC

Result of Pressure on ADC

- ▶ Very few sites permitted to accept biosolids
 - ▶ Very few choose to accept biosolids, particularly out of county material
 - ▶ Declining availability threatens key Northern California management practice
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Challenges for Agricultural and Horticultural Uses



Agricultural

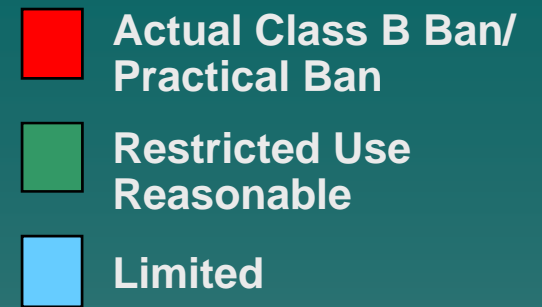
A wide-angle photograph of a lush green agricultural field stretching to the horizon under a clear, light blue sky. The crops are densely packed and appear to be in the early stages of growth.

- ▼ Grain crops
- ▼ Feed crops
- ▼ Cotton
- ▼ Horticulture
- ▼ Silviculture
- ▼ Specialty markets

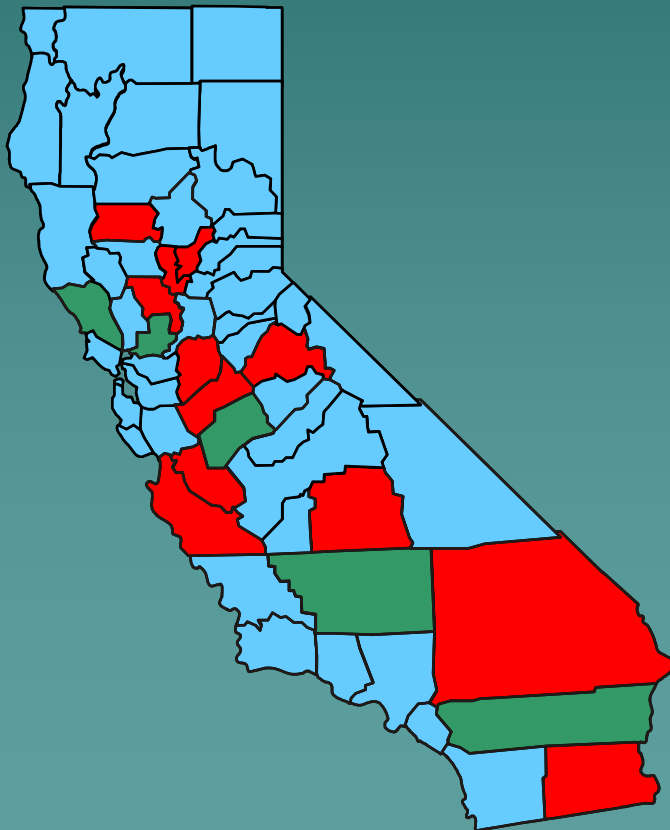
Land Application General Trends

- ▼ Increasing urbanization coupled with increasing public opposition
- ▼ Questions about pharmaceuticals and personal care products (PPCPs) in biosolids
- ▼ County Ordinances that restrict biosolids land application
 - Kern County
 - Imperial County
 - Solano County

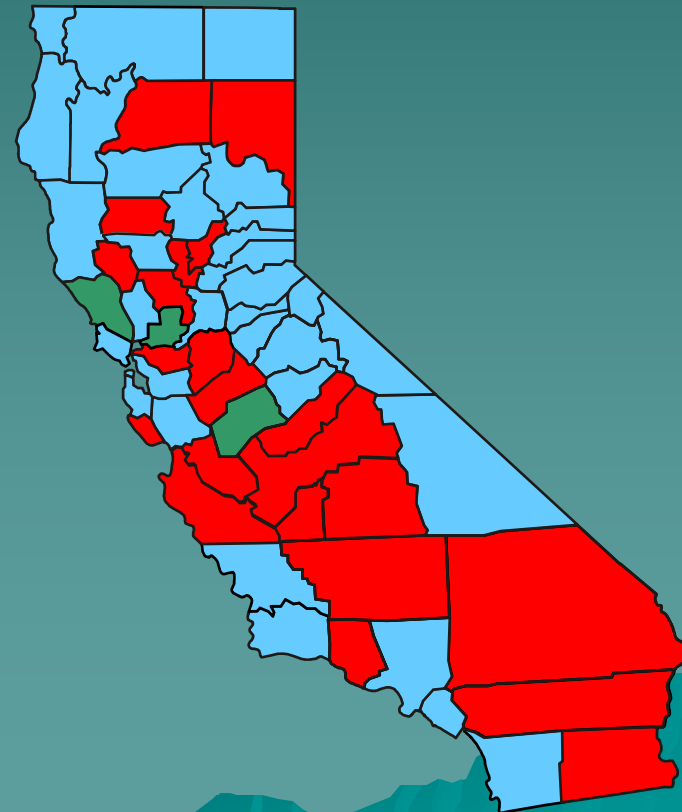
Local Regulations – Counties



1999



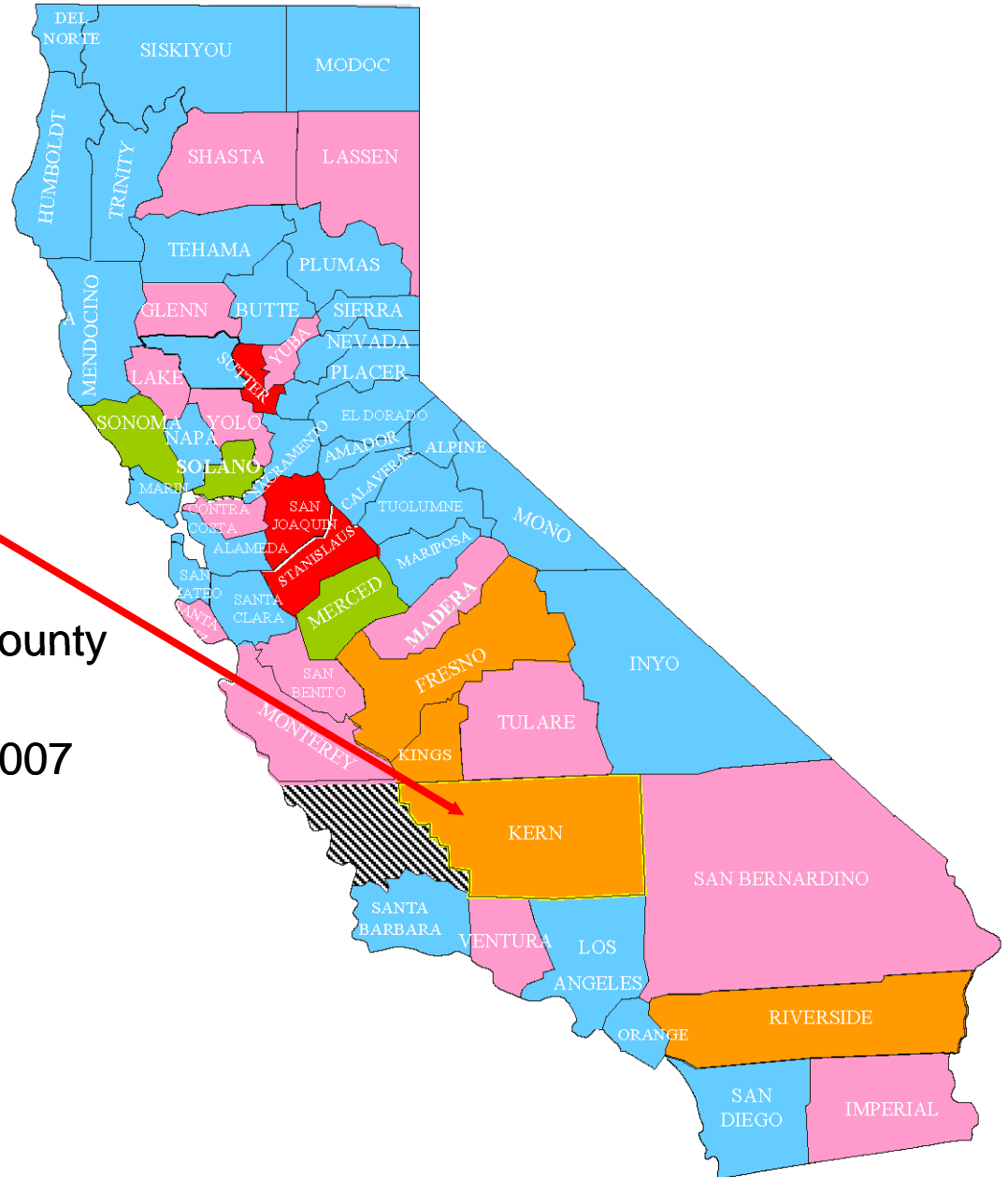
2009



Biosolids Land Application in California

Kern County Measure E

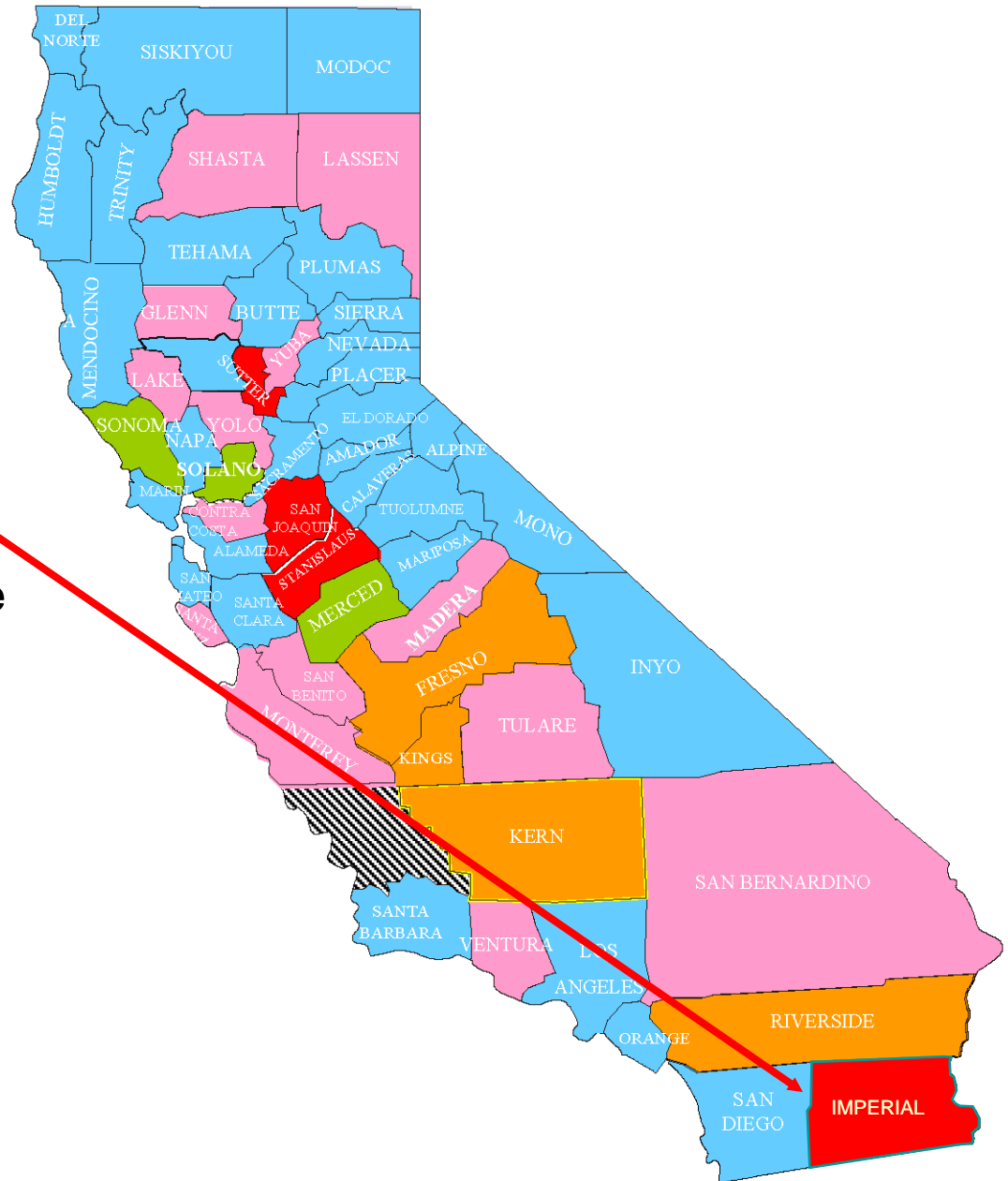
- Prohibited the land application of biosolids in unincorporated Kern County
- Overturned in July 2007
- Decision was appealed in Sept. 2007



Biosolids Land Application in California

Imperial County Measure X

- Unlawful to import sewage sludge into Imperial County
- Approved on February 5, 2008
- Passed with 66% of the vote

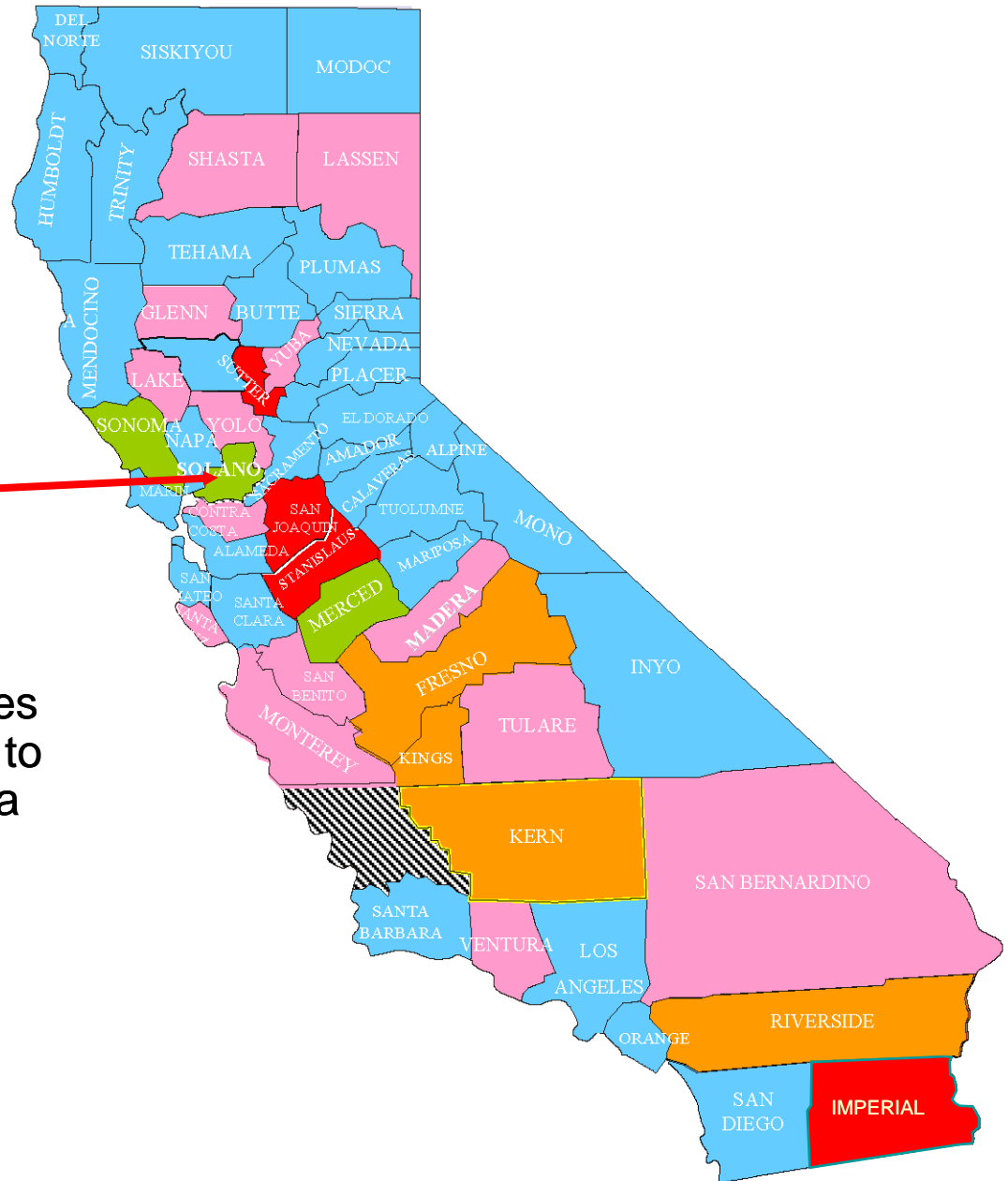


Map provided by CASA

Biosolids Land Application in California

Solano County Ordinance

- Initial (2003) ordinance regulated Class B biosolids
- 2008 renewal of ordinance requires all agencies land applying Class B to put a portion of their biosolids into a Class A or biosolids-to-energy process by 2012



Map provided by CASA

What does the future
look like?

The background is a solid teal color with a subtle gradient, transitioning from a darker shade at the top to a lighter shade at the bottom. In the bottom right corner, there is a stylized silhouette of a mountain range in a slightly darker teal color.

Long-Term Sustainability = Diversification

- Multiple Technologies
- Multiple Contractors
- Multiple Products / Markets
- Failsafe Options



Future Trends

Landfill Space

- ▼ Limits in Southern California
- ▼ Costs on the rise statewide

Transporting out of State/County for land application

- ▼ Environmental concerns
- ▼ Public/political concerns

Energy Options

- ▼ Renewable Fuel
- ▼ Gasification, Incineration
- ▼ Other – Some which are not proven

Compost Giveaways

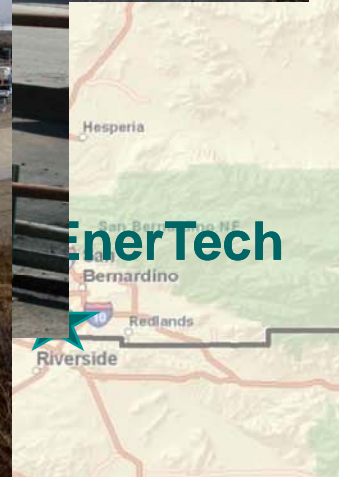
- ▶ Agricultural Use Robust
- ▶ Compost Giveaways/Use in Public Spaces in OCSD and SFPUC has been more challenging



Overall Biosolids Management Challenges

- ▼ Stability of out-of-state options
- ▼ Markets
- ▼ “Perception bleed” to products
- ▼ Cross Media Issues
- ▼ Active opposition
- ▼ Indemnification
- ▼ Litigation
- ▼ Facility siting
- ▼ Costs
- ▼ Local initiative
- ▼ Legislative uncertainties
- ▼ Energy options promising but not yet fully proven

Biosolids Management Facilities



EnerTech

Riverside

Key = Diversity,
Diversity, Diversity!

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Questions?

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