



# Spring Biosolids Symposium

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# CA Assn of Sanitation Agencies

- Represent more than 90% of sewerred pop of CA
- Executive Director – Bobbi Larson
- State Lobbyist – Mike Dillon
- Federal Lobbyist – Eric Sapirstein
- Renewable Resource Programs – Greg Kester
- Legal/Regulatory Affairs – Adam Link
- Communications – Catherine Smith

# 2012 CA Biosolids Use

- **680,000 dmt used or disposed**
- **369,000 dmt (54%) Land Applied or Distributed**
  - **233,000 dmt (34%) Class A Land Application or Distribution**
  - **165,000 dmt Compost**
  - **136,000 dmt (20%) Class B Land Application**

# 2012 CA Biosolids Use

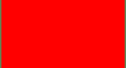





- 154,000 dmt (23%) as ADC or Final Cover at Landfills
- 17,000 dmt (2.5%) as fuel for Cement Kilns
- 10,000 dmt (1.5%) deep well injection
- 81% Beneficial Use (CA basis)

# 2012 CA Biosolids Use

- 66,000 dmt (~10%) Landfill Disposal
- 20,000 dmt (~3%) Surface Disposal (DLD)
- 19,000 dmt (~3%) Incinerated
- 25,000 (~3.5) Long Term Storage

# Biosolids Land Application in California

## Status of County Ordinances

-  Ban on All Land Application
-  Practical Ban
-  Ban on Class B
-  Class B Land Application Allowed
-  Developing Ordinances
-  No Regulations/Ordinances Enacted



# Kern County Update

- **Measure E Challenged in State Court January 2011**
- **Preliminary Injunction (PI) granted in June 2011**
- **Upheld in Court of Appeals 2013**
- **State Supreme Court reviewing timing question – unrelated to merits**

# AB 371 (Salas)

- **Legislation Introduced in Late March which would allow Kern County BOS to ban biosolids application**
- **Would essentially circumvent ongoing litigation**
- **And set a dangerous precedent which would threaten entire state**

# AB 371 (Salas)

- Passed 2 Assembly Committees and was then set to be heard on Assembly floor
- CASA members responded with opposition letters so pulled from floor
- Reintroduced in January – monitoring of groundwater and soil for unknown list of compounds

# Mine Reclamation

- **US EPA Region 9 Superfund held forum in November 2012 supporting the use of biosolids for mine reclamation**
- **Sally Brown, Rufus Chaney, Kirk Scheckel other experts provided research and real world experience**
- **All in attendance very supportive**

# Mine Reclamation

- Tremendous opportunity to recycle biosolids – turning moonscapes into habitats
- Synagro awarded contract for mine reclamation near Prescott, AZ using CA biosolids compost
- Work completed in May – great success
- Working to reclaim CA mines next

# Reclamation of Fire Ravaged Land

- **Biosolids very effective in reclaiming fire ravaged land**
- **Not only in revitalizing soil but by allowing native vegetation to replace invasive species**
- **Reduce severity potential of future fires**
- **Support at state level but no projects yet**

# State Mandates/Goals by 2020

- **33% Renewable Energy**
- **75% Recycling of Solid Waste**
- **Achieve 1990 levels of CO2 emissions**
- **10% reduction in Carbon Intensity of transportation fuel**

# Legislative and Regulatory

- **AB 1900 – Facilitate Pipeline Injection of Biomethane**
- **SB 1122 – Requires IOU procurement of 250 MW Bioenergy**
- **Jurisdictional authority issues**
- **Clean Air Act versus Climate Change**

# Pipeline Injection of Methane

- **AB 1900 passed to facilitate direct injection into pipeline**
- **State developed health standards**
- **Working on pipeline integrity stds**
- **IOUs vary in responsiveness**
- **Interconnection costs huge hurdle**

# SB 1122

- **Requires IOU procure 250 MW from:**
  - **110 - Wastewater and Urban Waste**
  - **90 – Dairy and Ag Waste**
  - **50 – Forest biomass**
- **Issues with eligibility and repowering definitions – will work with CEC to affect change**
- **Interconnection costs**

# Regulatory Jurisdictional Issue

- Organic waste into AD is increasing
- Supported by CEC, CPUC, SWRCB, CDFA, and CalRecycle
- Have been working with CalRecycle and SWRCB since '09 to resolve jurisdictional questions
- Finally near resolution!

# Jurisdictional Authority Issues

- 2009 Document stated TS/PF permit would be at discretion of Local Enforcement Agency (LEA)
- CASA argued that POTWs are already regulated for this under water and air permits
- Patchquilt regulatory landscape creates unnecessary disincentive

# Hauled in Organics for AD

- SWRCB NPDES/WDR permit language requiring SOPs, training, and tracking was developed
- CalRecycle included exclusion language in regulations as long as POTW is in compliance with this permit condition
- Hopeful SWRCB actions fill gap until CalRecycle regs are final

# CDFA Rendering Rules

- First proposed regs in July 2010
- Could have considered POTWs as renderers if they accepted FOG
- Ongoing discussions ultimately resulted in exemption for POTWs
- Regulations Became Final April 1, 2013!

# SCAQMD Rule 1110.2

- South Coast and Central Valley in severe non-attainment for ozone
- Rule places restrictive emission limits on stationary IC engines
- Control Nox (11), VOC (30), and CO (250) ppm emissions as of Jan '16
- May make IC engines utilizing biogas too costly to operate (flare instead)

# Low Carbon Fuel Standards

- One option which may prove viable is the LCFS (State, FED RIN, & Fuel)
- CARB developing protocols for various fuel feedstocks
- POTWs methane to fuel has a very attractive carbon intensity
- Small to medium (5-20 MGD)
  - 11.5 g CO<sub>2</sub>e/MJ
- Large (> 100 MGD)
  - -65.3 g CO<sub>2</sub>e?MJ

# Low Carbon Fuel Standards

- For comparison –
- Diesel 97gCO<sub>2</sub>e/MJ
- Gas = 98 gCO<sub>2</sub>e/MJ
  
- Credits available through CA LCFS and Federal RFS RIN programs
- Plus use of value of fuel
- Down side is that power now must be purchased

# Bay Area Biosolids to Energy

- Consortium of 20+ agencies seeking new technology to produce energy from biosolids
- RFP responses received Oct 2013
- Desire proven technology but limited options
- Demonstration project funded by CEC

# Arsenic Cancer Slope Factor

- Proposed change for IRIS CSF for inorganic arsenic published 2/19/10
- Science Advisory Board (SAB) initially drafted support letter but withdrew
- Congress/NAS called for change
- Process to use best science underway

# Triclosan (TCS)

- Dr. Tom Young – UC Davis -Evaluated CA biosolids and impacts of triclosan on microbial populations
- Found increase in population density and diversity even though TCS on own is toxic
- Key is all other TOrCs should also have been present, though not focus