



CALIFORNIA COMPOST COALITION



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Sustainable Organics Recycling

The State of the Compost

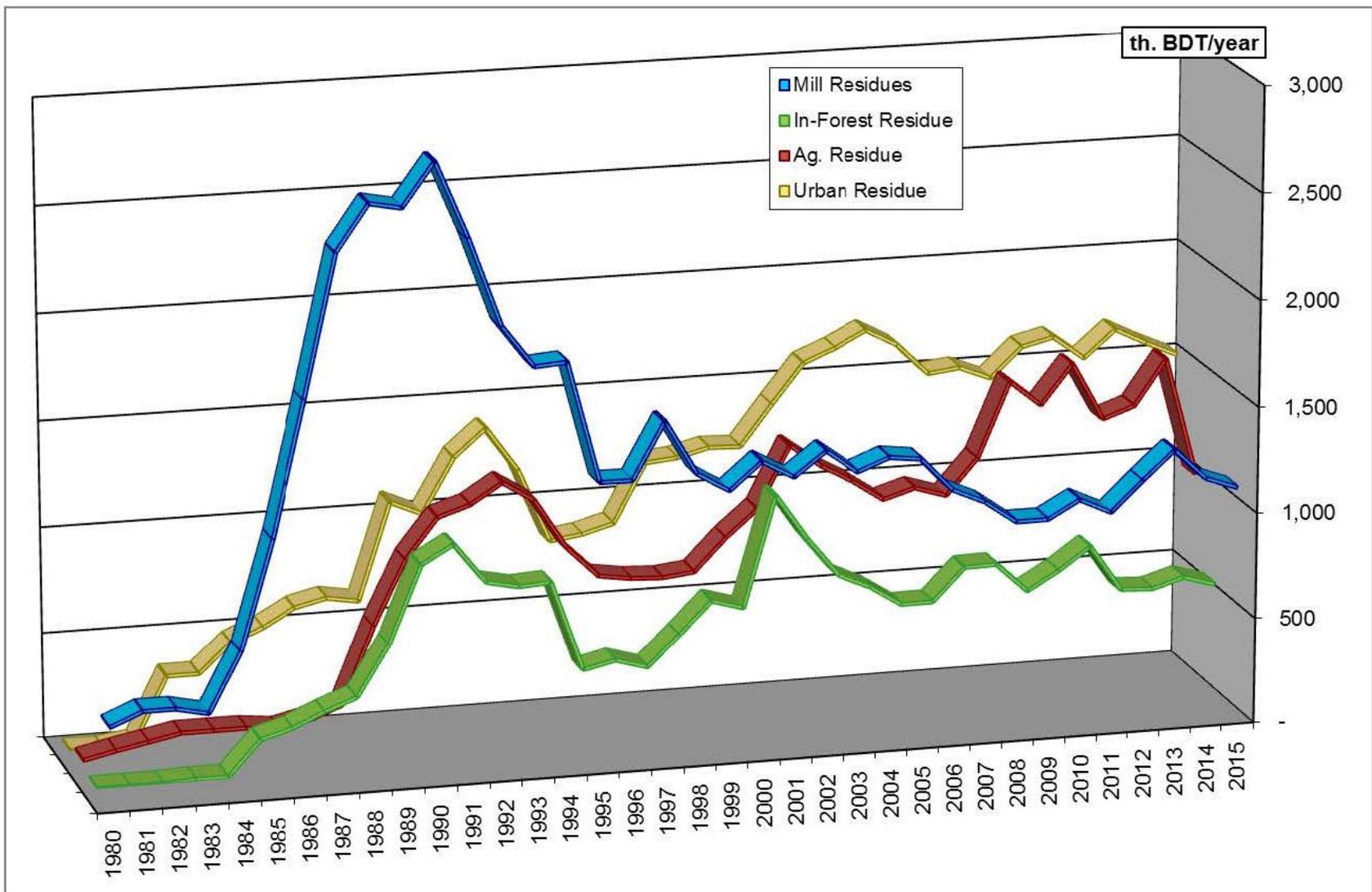
- ✓ The State of the Compost is healthy
- ✓ Organic Compost Sales are robust
- ✓ Farm to Fork - Fork to Farm
- ✓ International Year of Soils 2015
- ✓ Healthy Soils Initiative
- ✓ Compost weaves in all of the Gov's 5 Pillars
- ✓ California Climate Investments for clean compost
- ✓ AB 1826 meets AB 876 meets SLCP
- ✓ The Plan before the Ban
- ✓ Permit Streamlining with new regulations



The State of the Biomass

- ✓ The State of the Biomass is in a State of Emergency
- ✓ 9 plants closed in 2014/2015 losing 1.4 MTY total with 428,000 tons of urban
- ✓ 7 plants like to close in 2016 losing 1.5 MTY total with 449,000 tons of urban
- ✓ Revenue of \$25 to \$30/BDT could now cost \$10/BDT to tip
- ✓ AB 590 (Dahle) tried to use cap and trade revenue of \$100 million
- ✓ Governor's Emergency Proclamation related to forest health having the PUC extend contracts with \$150 million in the budget

California Biomass Fuels Market by Category

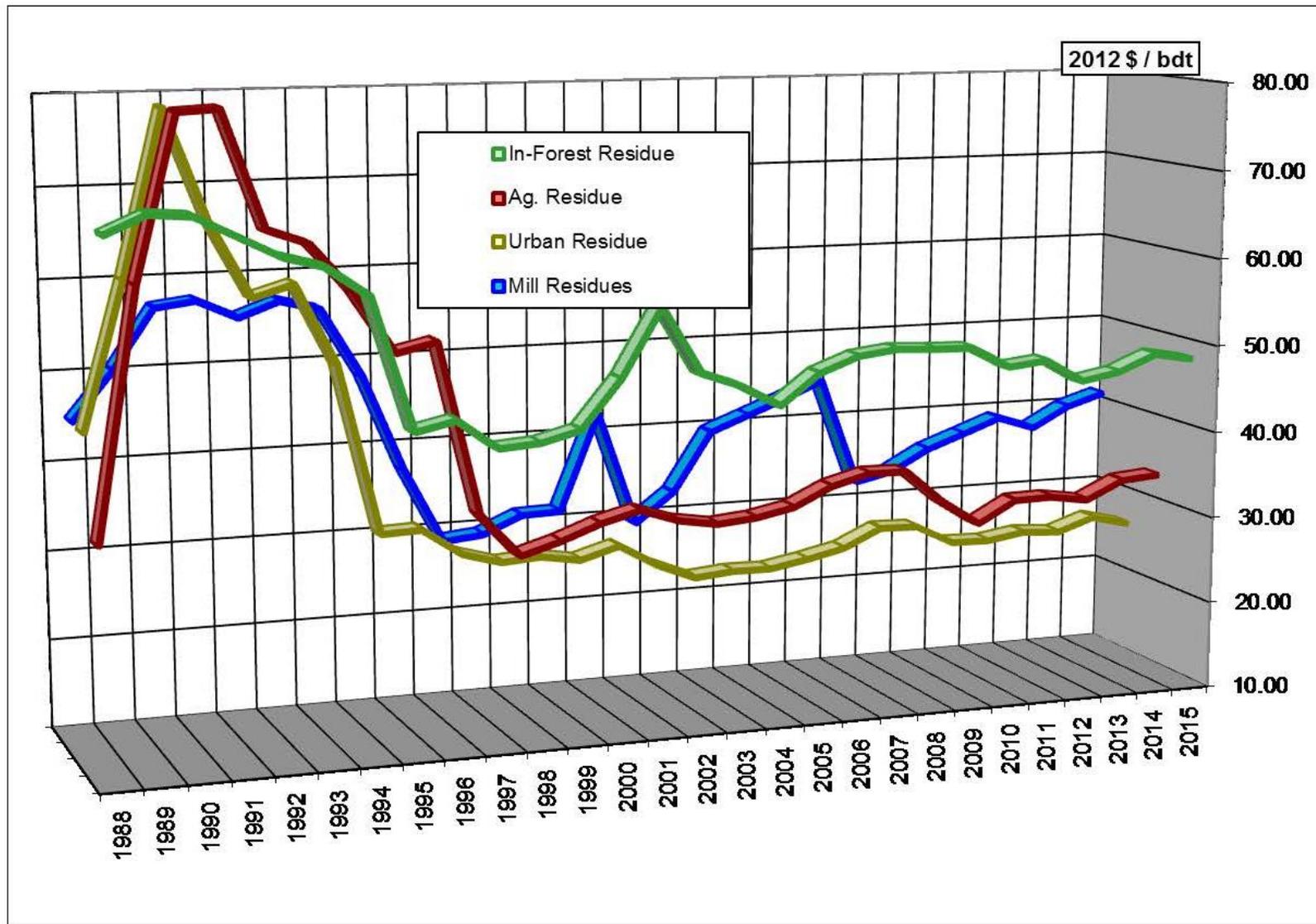


Urban Biomass to Energy
 1,500,000 tons in 2014
 ➤ Lose 428,000 tons in 2015
 ➤ Lose 449,000 tons in 2016
 620,000 tons in 2017?
 SB 498 tracking in 2015
 AB 801 tracking in 2018

Lumber Disposed in Landfills
 ➤ 4.2 MTY in 2008
 ➤ 3.7 MTY in 2014

Increase Organics Diversion
 ➤ 1.7 MTY commercial
 lumber – AB 1826 by 2020
 ➤ 3.1 MTY of lumber from
 SLCP 90% diversion by
 2025

Biomass Fuel Prices by Category



Urban Biomass Pricing 2014:
 \$25 – 30/BDT payment FOB
 \$20 – 25/BDT haul costs
 Net: \$5/BDT

Urban Biomass Pricing 2016:
 \$ 10/BDT tip fee cost FOB
 \$20 – 25/BDT haul costs
 Loss: \$30-35/BDT

Landfill Tip Fees:
 \$20 - \$35/ton

Emergency Proclamation:
 PUC \$150 million for forest
 Need \$45/BDT for in-forest
 Crowd out urban/ag

Agricultural biomass being
 left in the fields with some
 burning



SB 1345 (Chesbro, 2007) Failed Legislation for 1 MTY by 2012
Compost Market Program – PRC 42240-42246 since 1991



Green procurement by local government for parks
Colorized wood chips
Storm water filtration



Biosolids co-composting - bulking agent – C:N ratio



Mulches and soil amendment blends – bagged or bulk

Can new biomass arrive in time to bridge from old-line biomass?

Biomass Conversion facilities

- SB 498 (Lara, 2014) – 100% diversion – 100% renewable energy
- 1 MW - 15,000 TPY – distributed generation
- Co-locate – use 1/3 on site – net meter 2/3 – CHP waste heat use
- 100 facilities – 100 MW – 1,500,000 tons per year

Feed-In Tariff Implementation – Small-Scale Bioenergy under 3 MW

- SB 1122 (Rubio, 2013) – PUC tariff for 250 MW
 - 110 MW – Urban biomass, wastewater
 - 90 MW - Dairy, agricultural bioenergy
 - 50 MW - Forest biomass
- How much to gasification? 100 MW ? Rest to dairy and wastewater?
- BioMAT - Floor price of 12.77 cents/kwh starting Feb 1, 2016

Co-benefits:

- Biochar for compost mixes to sequester carbon
- Filtration

