

RESOURCE RECOVERY PARK AT TAJIGUAS

More recyclables, compost and
energy through new technologies



BOARD DIRECTION TO EXPAND TAJIGUAS LANDFILL

- **County Board of Supervisors supported expansion in 2002**
- **Directed staff to research alternatives to landfilling and increase reuse and recycling of materials**



CONTEXT FOR PROJECT

Communities served by Tajiguas Landfill:

- County of Santa Barbara
- City of Santa Barbara
- City of Goleta
- City of Solvang
- City of Buellton

FORMATION OF CONVERSION TECHNOLOGY SUBGROUP

In 2007 BOS directed staff to actively look into feasibility of conversion technologies to serve the South Coast

Staff formed working group including reps from each jurisdiction served

All members have contributed funds and staff time towards this project

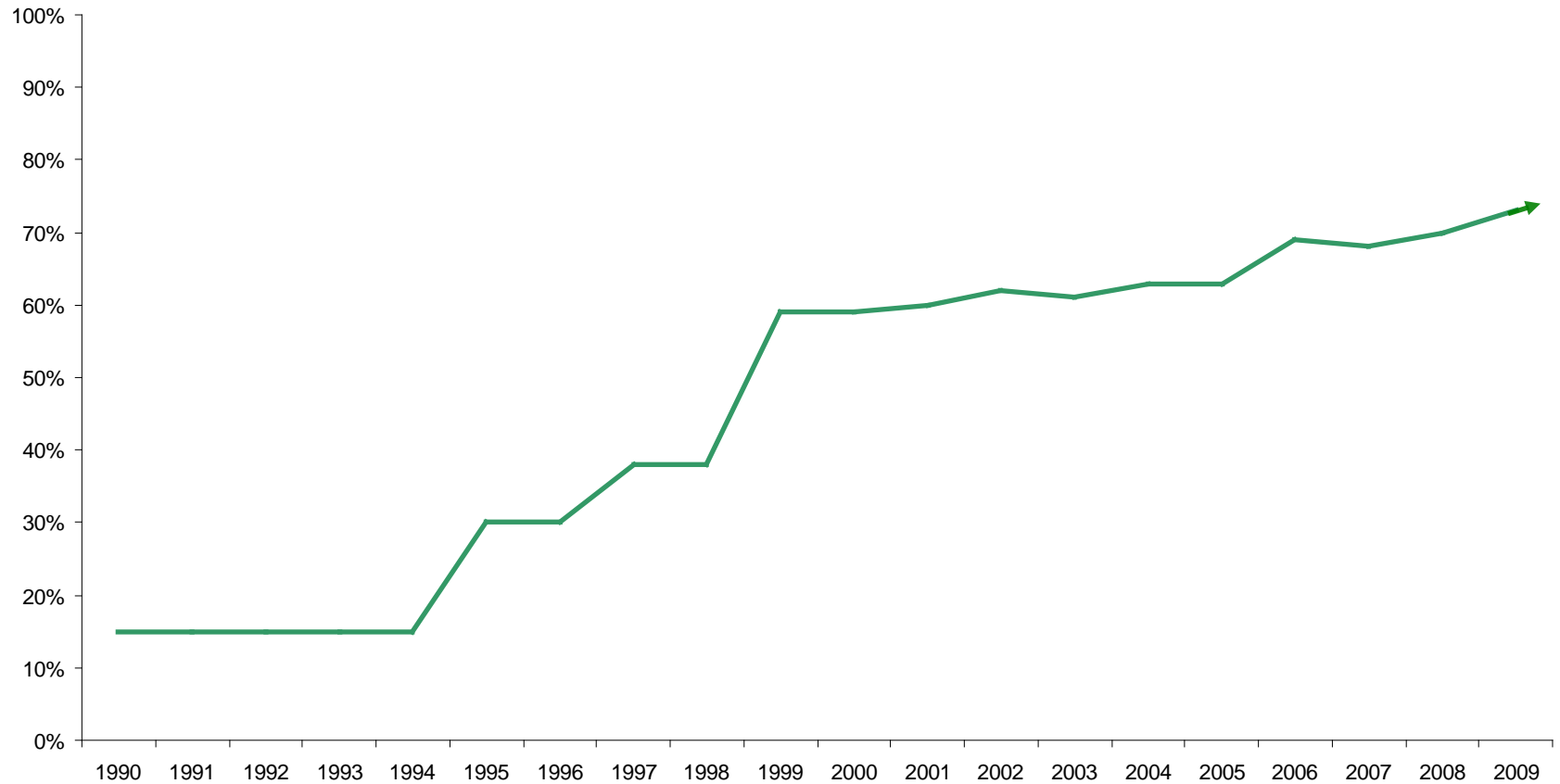
CONTEXT FOR PROJECT

Dozens of successful programs have been implemented since the passage of AB939 in 1989



SUCCESSFUL DIVERSION PROGRAMS

Jurisdictions served by Tajiguas divert more than 70% of their waste from the landfill



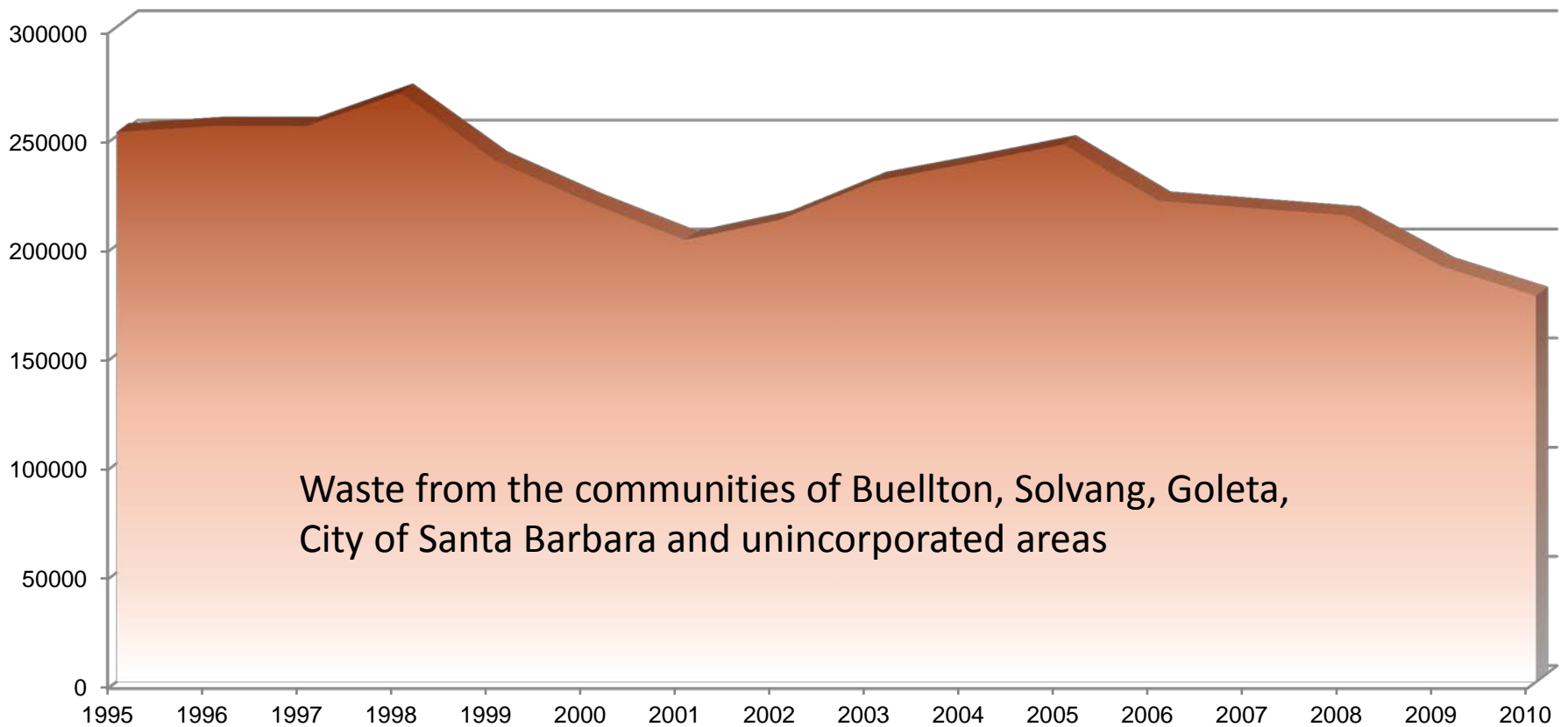
WHAT MATERIAL IS BURIED?

Composition of msw has changed

Left with more materials that can not be recycled

	1997	2008	% Difference
Recyclables	32%	25%	-7%
Organics	41%	29%	-12%
Trash	27%	46%	+19%
Total	100%	100%	100%

TAJIGUAS LANDFILL DISPOSAL



WHAT WE NEED

... a way of managing what is still being buried.

But not a replacement for existing or planned recycling programs.



GOALS OF PROJECT

Original goals contained in RFP:

- Pre-processing or converting msw into beneficial products
- Reduce environmental impacts of landfilling msw
- Competitive tipping fee compared to alternatives
- Production of clean green energy
- Provide a humane work environment
- Result in a long-term waste management plan (20 years)

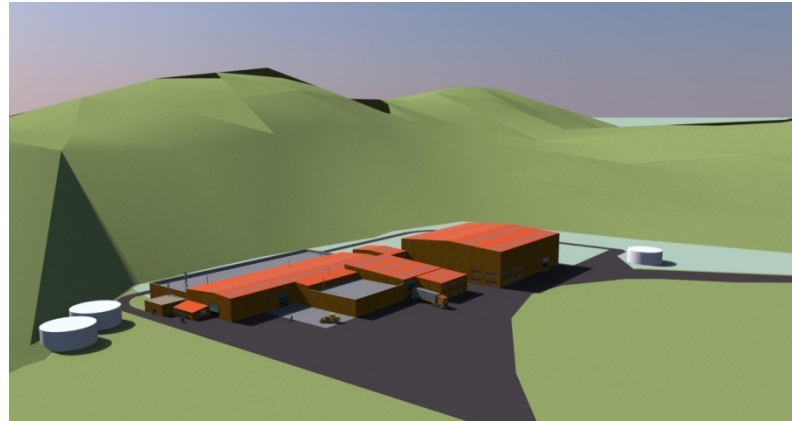
- Emphasis on not affecting existing or planned recycling programs but management of msw being landfilled

RFP AND RESPONSES

- 2009: RFP released to 11 companies
- 2010: 4 companies responded (with 5 proposals)
- Early 2011: found 2 companies did not meet local needs
- Summer 2011: selected preferred company with 2 proposals

MUSTANG – BASE MRF & AD

- Sort msw in an advanced Material Recovery Facility
- Sell recyclables
- Use enclosed Anaerobic Digester modules to compost organics
- Convert biogas collected by AD to energy
- Landfill remaining waste



MUSTANG – BASE

MRF & AD

- ~1 Megawatt net energy output
- ~60% diversion
- Little additional cost when compared to alternatives
- More commonly used technologies
- Less complicated permitting process

MUSTANG – BASE

MRF & AD

Greater flexibility to process material collected by current and proposed diversion programs

- Commingled recyclables
- Organics



MUSTANG – ALTERNATIVE MRF, AD & THERMAL GASIFICATION

- Same as Base Proposal (MRF & AD)
- Adding a Thermal Gasification facility to convert the remaining waste (that could not be recycled or composted)



MUSTANG – MRF, AD & THERMAL GASIFICATION

- 10.5 Megawatts net energy output
- 85% to 90% diversion
- \$3.00 to \$4.00 more per month to ratepayer than Base Proposal
- Less known technology
- More complicated permitting process

CONTINUED ANALYSIS

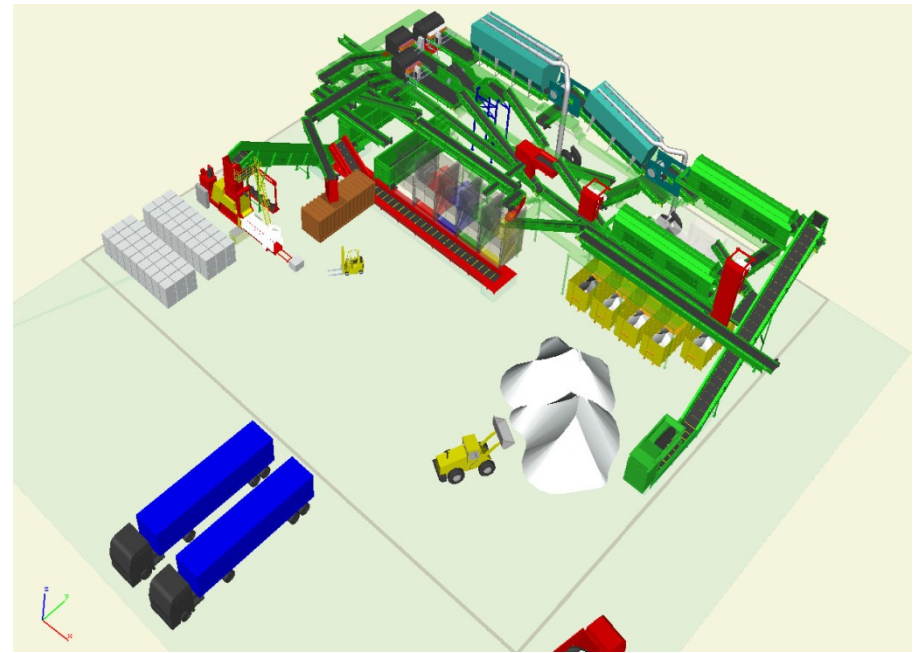
Air emissions during conversion of fuel/gas to energy

- Lack of comparable data
- Used in different countries with different feedstock



PREFERRED PROJECT

May 2011: Public official forum approved preference for Mustang's Base Proposal with the potential to phase in gasification as more air emission data becomes available.



STATEWIDE TRENDS

- These types of facilities being pursued in other parts of California
 - City of San Jose
 - County of Riverside
 - Salinas Valley Waste Authority
- CalRecycle Anaerobic Digestion Initiative – encouraging greater development of AD facilities statewide
- State determination that gasification facility proposed by Salinas Valley Waste Authority is eligible for Renewable Energy Credits

PROJECT OUTREACH

- **Staff has conducted comprehensive outreach efforts since the initiation of the project**
 - Over 90 presentations to area non-profits, agencies, and organizations
- **Enthusiastic public response to project**
 - Interested in doing more with our waste (increasing recycling, generating energy, decreasing environmental impacts)
 - Interested in knowing more about air emissions associated with thermal technologies

NEXT STEPS – WINTER 2011/2012

- **Seek Board and Council's approval to :**
 - Pursue Mustang Base Proposal (MRF & AD)
 - Initiate CEQA analysis
 - Approve MOU with vendor

QUESTIONS & COMMENTS



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