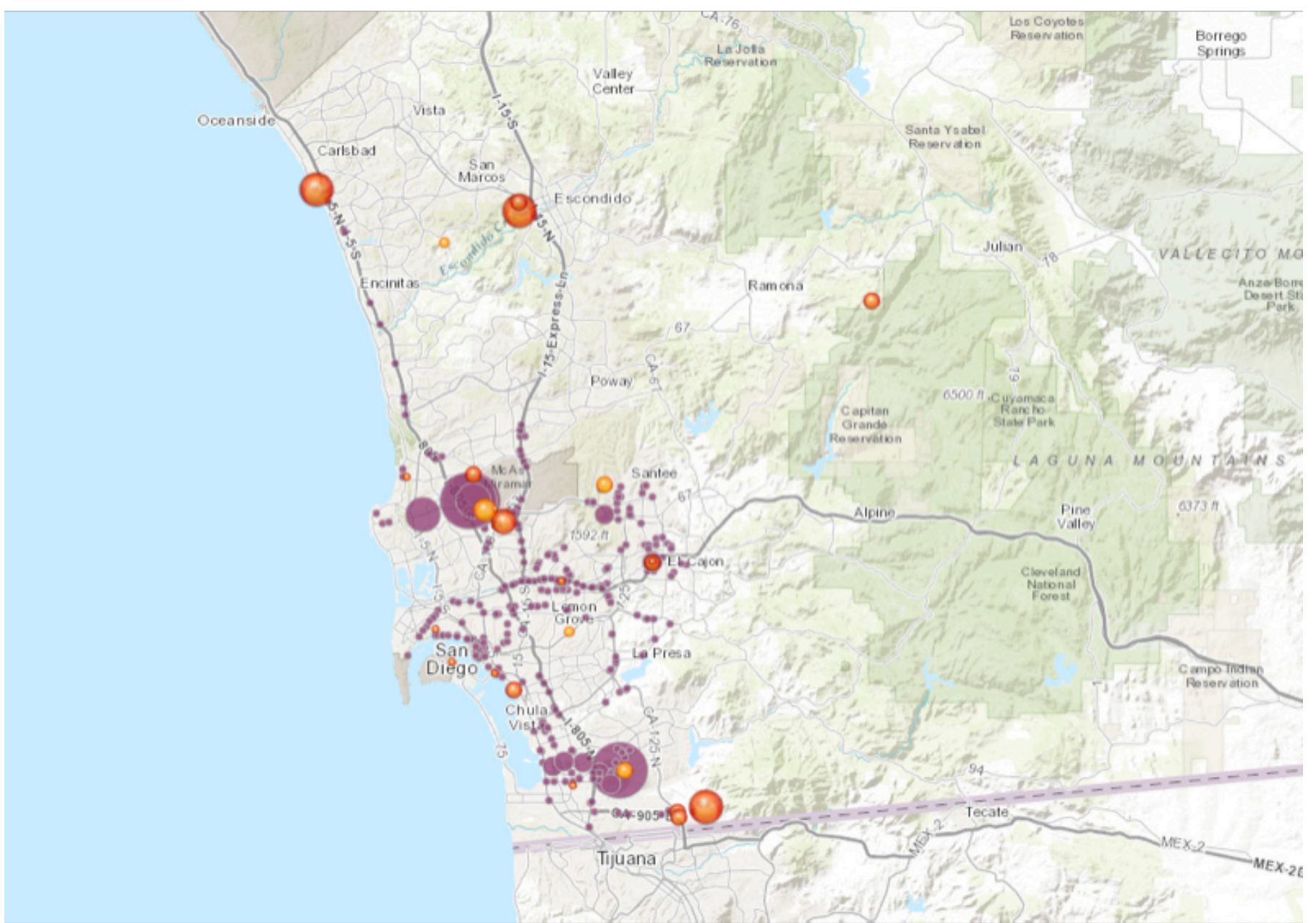


Market Driven Organics Recycling



AGRI
SERVICE

SUSTAINING THE CYCLES
Organic Recycling
Mulch
Soil Amendments




Methane in San Diego County



Reaching Zero Waste



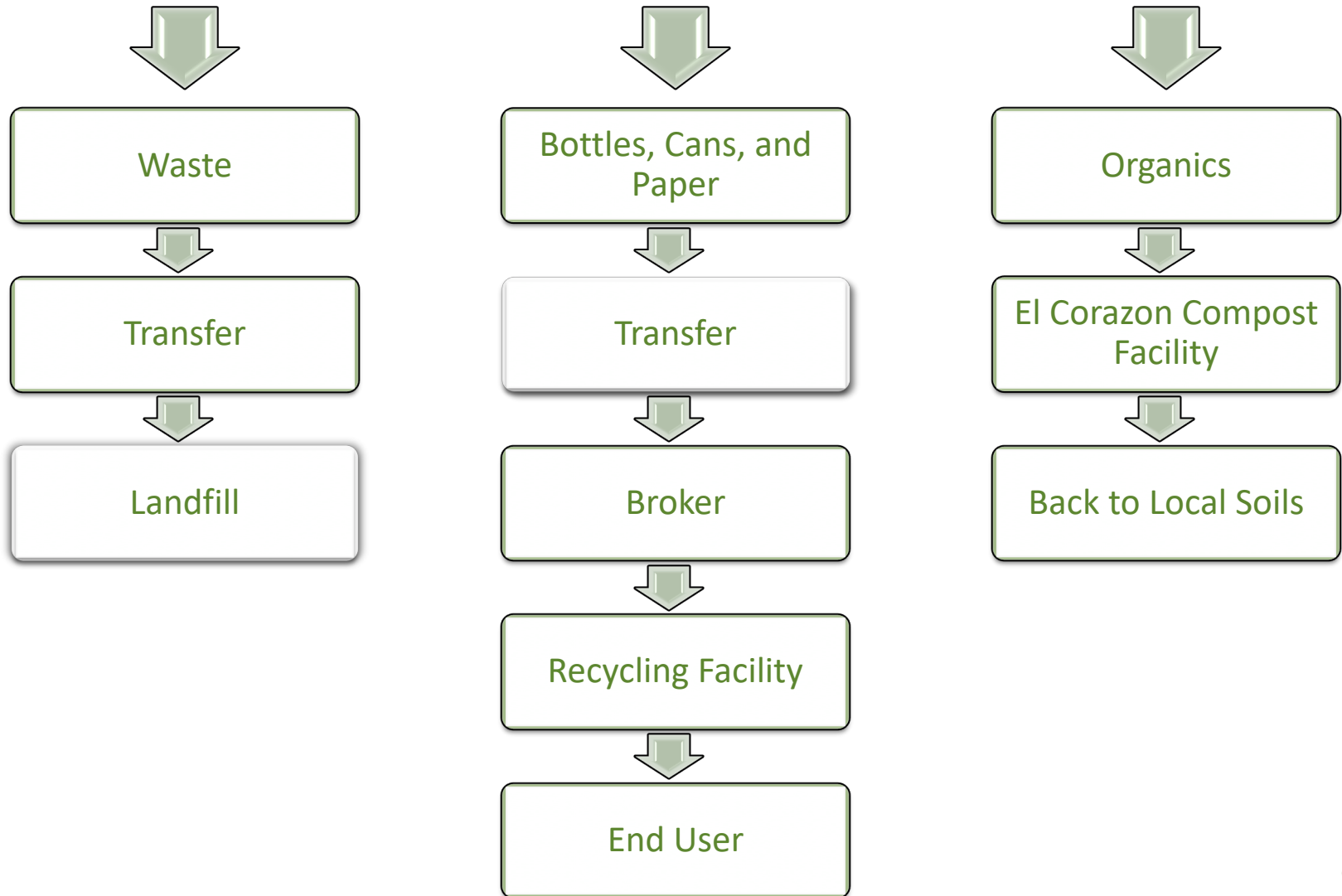
Benefits of Organics to Soil



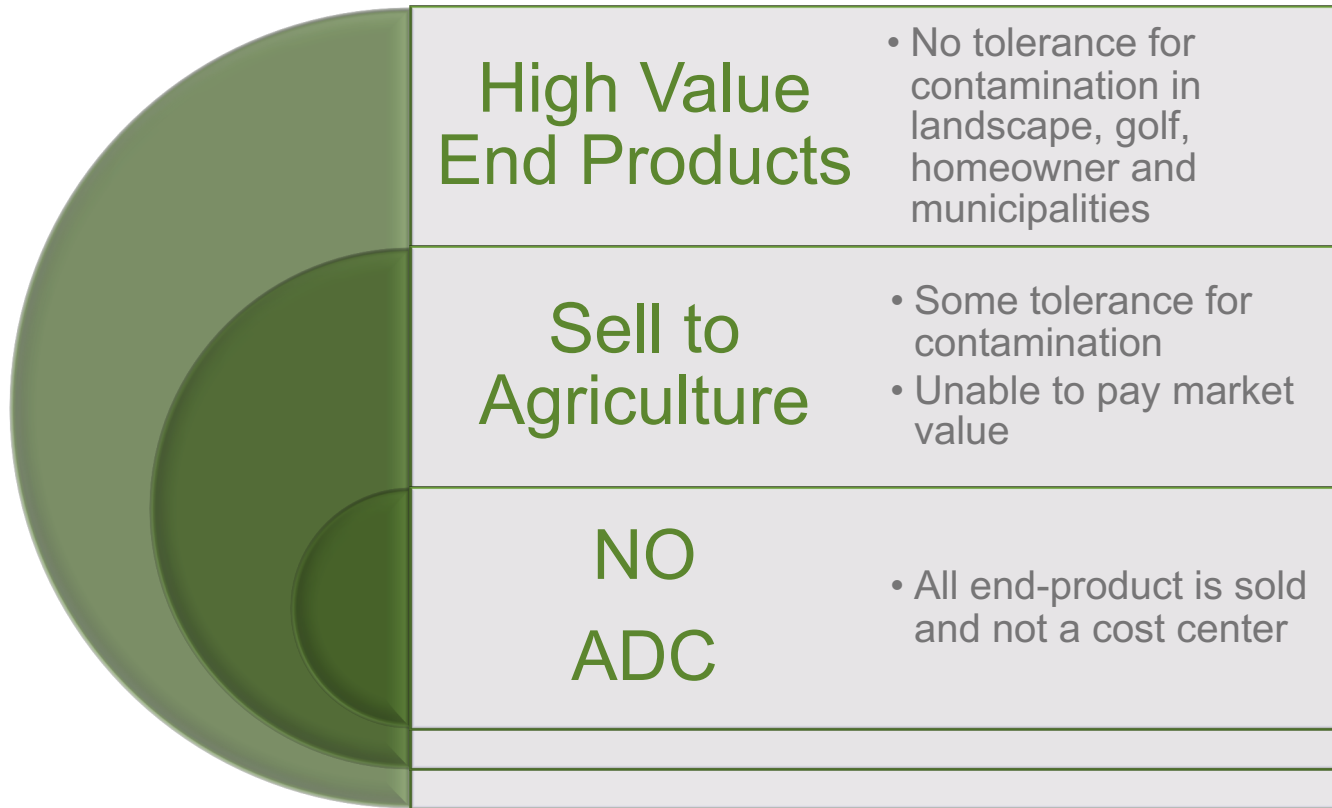
Adds Carbon to Soil	<ul style="list-style-type: none">• Provides food for microbes
Reduces Erosion	<ul style="list-style-type: none">• Shatters rain drops• Absorbs water
Improves Soil Structure	<ul style="list-style-type: none">• Microbes bind clay particles to improve water infiltration and storage



Collection



Agri Service Goals



El Corazon Compost Facility

- Opened in 1995-Open Windrow
- Infrastructure Improvements for odor control in 2013
- Feedstocks Accepted
 - Oceanside Curbside
 - Self Haul from Oceanside and surrounding area
 - Clean construction wood
 - Select food and liquid feedstock



Zero Waste Opportunity Products and Services



Potential Feedstocks

- Landscape Trimmings
- Construction wood
- Liquid Waste
- Kitchen Waste



Finished Products

- Compost
- Mulch
- Blended Soil Products
- Bagged Consumer Products
- Compost Tea



El Corazon Method



Processing

- Feedstock selection
- Prompt processing
- Developed markets



Mechanical

- Positively aerated floor
- Turned windrow



Challenges and Barriers

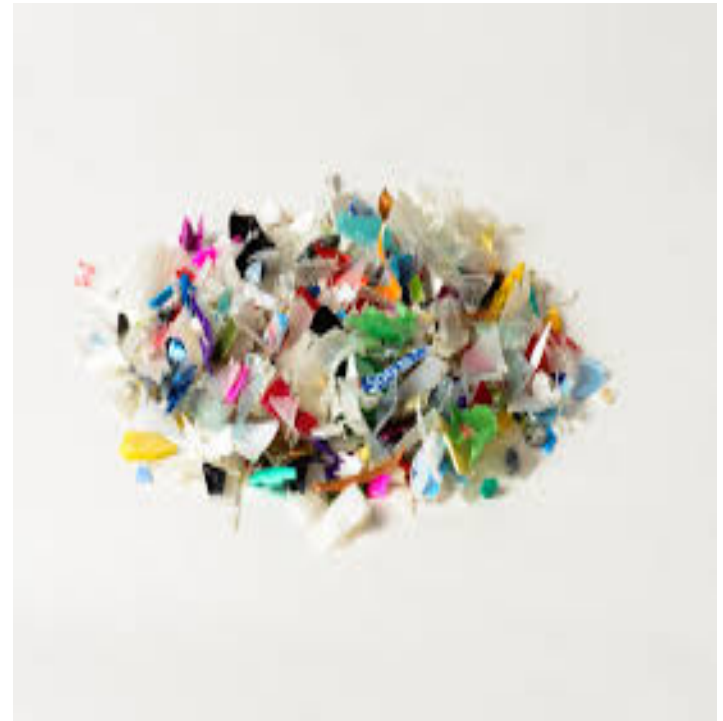






Our Philosophy

Remove contamination prior to grinding



Considerations for Increasing Diversion

- **Identify barriers to removing organics from the landfill**
 - Conflicting Regulations
 - Air, Water, Local
 - Mindset: Diversion Model versus Market Driven Model
 - “One Size Fits All” Regulatory Structure
 - Develop Regional Approaches for Conservation and Diversion
 - Set Price Points for Waste Programs to Reflect True Costs of Disposal



San Diego Crop Values

- Vegetable and Vine: \$38,198/Acre
- Fruits and Nuts: \$11,088/Acre
- Cut Flowers: \$91,929/Acre
- Nursery: \$124,572/Acre
- Field Crops: \$30/Acre



Opportunity

Crop	Product	Acres	Yards/Acre	Use Potential Cubic Yards	Est. Tons
Vegetable/Vine	Compost	3,837	50	191,850	95,925
Fruit/Nuts	Mulch	34,534	150	5,180,100	1,726,700
Cut Flowers	Compost	12,475	50	623,750	311,875
Nursery	Compost	8,670	50	433,500	216,750
Field Crops	Compost	200,301	125	25,037,625	12,518,813



Cost per Acre

Crop	Product	Material	Transport	Spreading	Total
Vegetable/Vine	Compost	\$500	\$250	\$500	\$1,250
Fruit/Nuts	Mulch	\$750	\$400	\$1,500	\$2,650
Cut Flowers	Compost	\$500	\$250	\$500	\$1,250
Nursery	Compost	\$500	\$250	\$0	\$750
Field Crops	Compost	\$1,250	\$600	\$1,250	\$3,100



Transportation CO₂

- 22 pounds of CO₂ from 1 gallon of diesel
- 5 miles per gallon
- 25 tons per truck
- 4.4 pounds CO₂ per mile
- 0.18 pounds CO₂/ton/mile
- Therefore 1,000,000 tons organic material will introduce into the environment 176,000 pounds of CO₂ for each mile it is moved.
- If we compost, materials moved twice.



Considerations

- **Identify barriers to removing organics from the landfill**
 - Conflicting Regulations
 - Air, Water, Local
 - Mindset: Diversion Model versus Market Driven Model
 - “One Size Fits All” Regulatory Structure
- **Quantify benefits of removing organics from the landfill**
- **Conservation**
 - Saves Transportation and Water Use
- **Methane Reductions**
- **Carbon Sequestration in Landscape, Permaculture and Rangeland**
- **Save Landfill Space**



Thanks!



Building Better Soils

