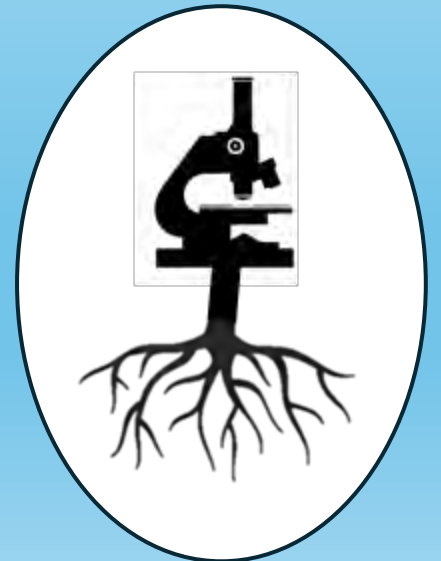


Carts - to - Composters: From Phoenix to Albuquerque

Bernalillo County Extension
Master Composters



Allen Doyle,
Sustainability Visions, LLC



Bernalillo County Composter Training

- Household Based
- Volunteer Trainers
- DIY or Retail Containers.



Second Life for Retired Trash and Recycling Carts



Reducing Waste; Building Soil



Methane Impacts: 2023 Calculations



- 58% of the methane from landfills comes from food waste
- 61% of the total methane produced is released to the atmosphere
- One metric ton food $\approx$ 0.86 tons CO₂e — effectively a 1:1 equivalent
- In 2020 landfilled food scraps released 55 million tons of CO₂e to the atmosphere

Phoenix Municipal Waste Trash & Recycling Carts

- ~400,000 Households
- Desert Environment—Very hot summers, Mild winters
- Some Trash Carts Beyond repair
- Plastic difficult to recycle
- When buried, carts “float” to the surface

Other Cities:

- Cart conversions create 10's of thousands of surplus carts
- Owned by Haulers with no municipal input; Fate Unknown

Cart Opportunities



- Basin of Carts still intact
- Large volume 80-90 gal
- Customer Demand for composting container

Solution: Carts – to – Composters

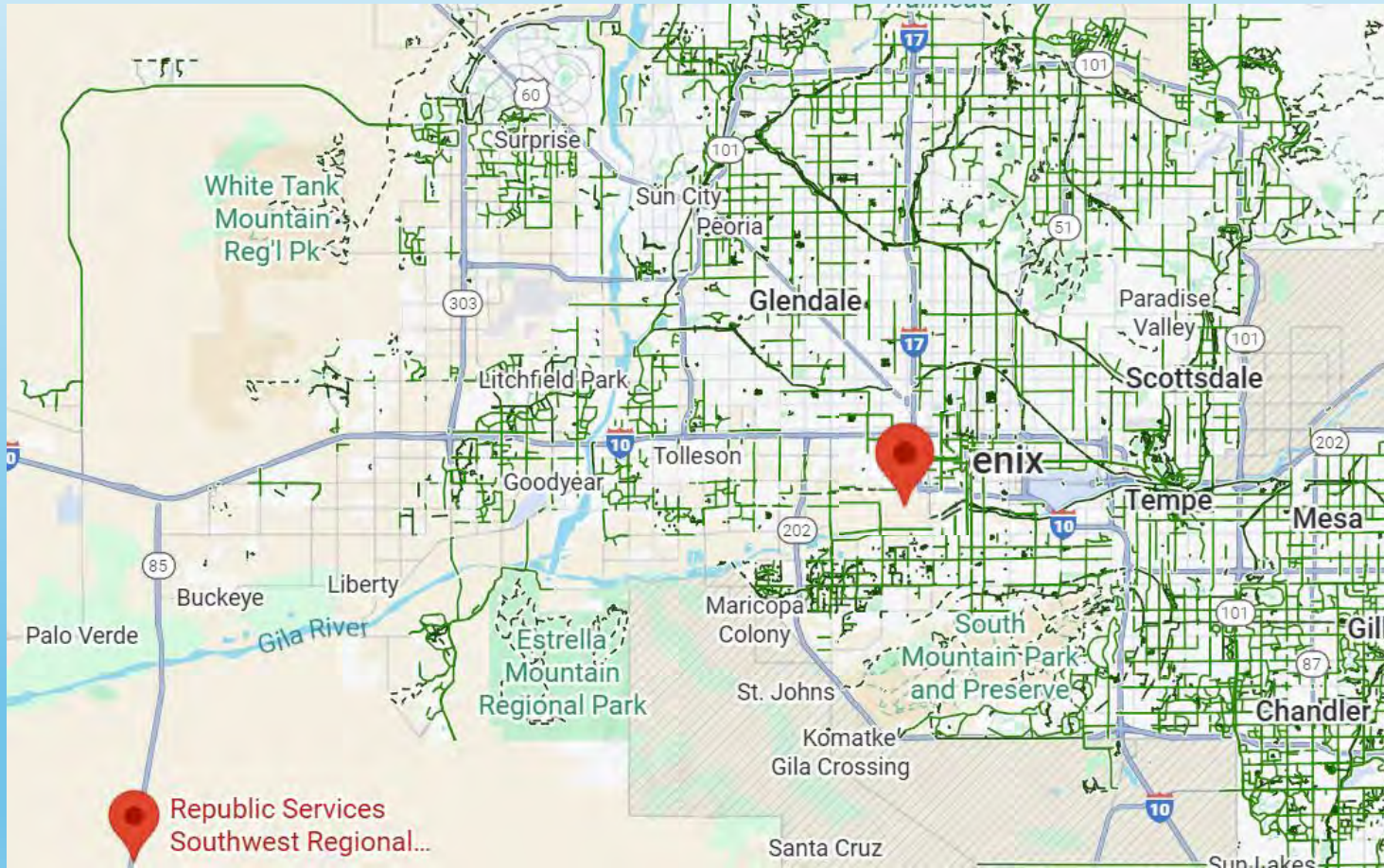
- Present Practice—Ideal?
- Cut off bottom
- Drill ventilation holes
- Sell for \$5 at 2 Transfer Stations



Phoenix Solid Waste
Department



Where: Transfer Stations



27th Ave Compost
Facility

Municipal Scale: 27th Ave Compost Facility

- Opened 2017
- Within “Resource Innovation Campus”
- 27 Acres
- 55,000 Tons/y
- Turned Aerated pile, 45-60 day completion
- Envision Award for Sustainable Infrastructure



VALUE: Cart – to – Composter Program



City of Phoenix Public Works Department

- Reduced Tonnage
- Reduced Hauling and Tipping Fees
- #/Households ?
- \$/pound ?
- 400,000 households
- \$ Savings ?
- Reduced Organic Matter & Methane
- Customer Satisfaction

Contact information

Adrian Valdez
Phoenix Public Works Department
Solid Waste Supervisor
Desk: 602-495-3736
Web: [phoenix.gov/publicworks](https://www.phoenix.gov/publicworks)

[https://www.phoenix.gov/administration/departments/publicworks/
residential-trash-
recycling/composting.html#composting_at_home](https://www.phoenix.gov/administration/departments/publicworks/residential-trash-recycling/composting.html#composting_at_home)



SIDEBAR: Plastic Residuals, Turned Aerated Piles

FIGURE 14. AVERAGE RESIDUALS OF COMPOSTABLE PLASTIC PACKAGING AT ENDPOINT (DOSE RESULTS)

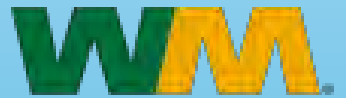


Albuquerque Status: Carts to Crusher



City: Sends to Barco MRF Facility “Required” by contract,

Mayor’s office contact



County: Waste Management, Inc
Phoned 4x

District 2 Comm. next

Phase 1: Pilot Design Test 10-15 Carts

- 65 Gallon Carts—Full Sun Compost
- 95 Gallon Carts—Waste Management
- Pilot Design: Convenience, aesthetics, size, aeration, product
- Home Test Site



Partner:



LITTLE GREEN BUCKET

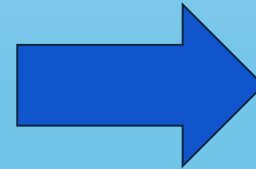


FULL SUN COMPOST

Community Composting Role

Surplus 65 Gallon Carts

Consistent Starting material: fresh & aged



Test Design

Optimize:

- Moisture & aeration management;
- convenient set-up
- minimal labor
- Minimal/beneficial aesthetics
- Valuable product



Dispensing, aeration, drying.
Aesthetics, complexity
Necessary?

Preliminary Results

1/4 Full

Elevated base

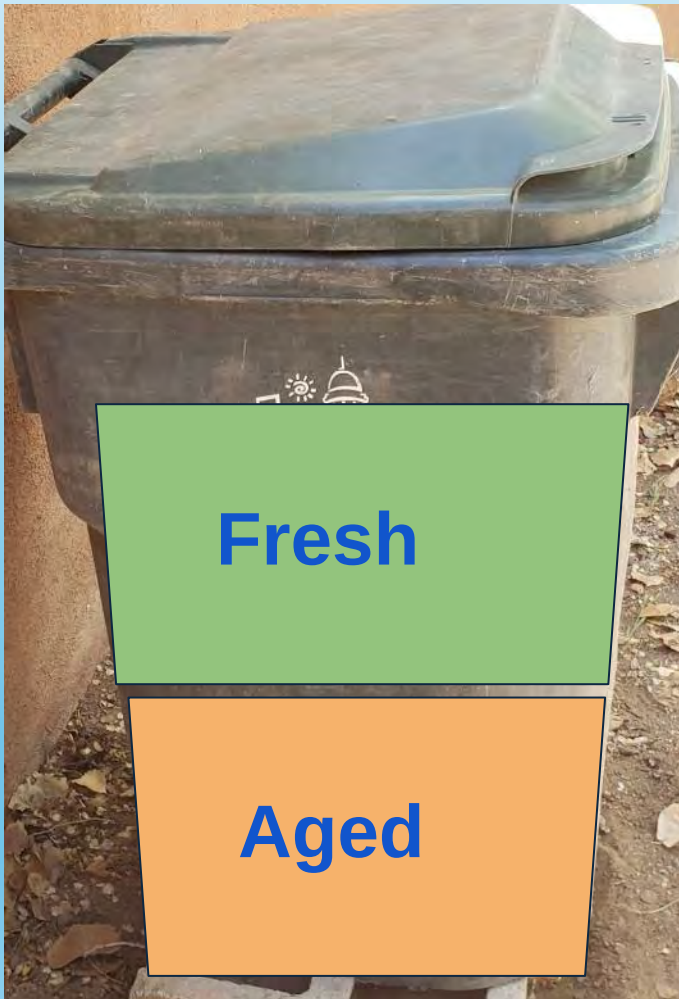
Plastic membrane top

No Ventilation holes

→ Drying around edges



Realistic Residential “Treatments”



3/4 Full, 1/3 Full?

65 & 96 Gallon

Optimal starting moisture

Two layers

No holes, Plastic film cover

Six months

No turning

Base? Monitor or measure?

Pilot Testers: Urban & Rural



- BCEMC members
- Community sites
- BCEMC Demo Sites

<https://www.nmcomposters.org/demonstration-sites>

- Community Gardens
- Full Sun Compost

<https://www.fifabq.org/currentgardens>

- NM Healthy Soil

<https://www.nmhealthysoil.org/community-composting/>

Phase 1: Market Analysis and Messaging

- What percent of households want to compost?
- Case studies?
- What values do ABQ & BernCo get? What barriers?
- Co-Messaging opportunities?
- Distribution sites

Key ABQ Stakeholders, Pilot

- Master Composter Program
- NM Healthy Soil
- Little Green Bucket
- Mayor's Office: Arya Lamb
- BernCo District 2: Baca
- Sierra Club: Melissa Bernadin
- Waste Management
- CABQ Waste Management



Who: Collaborations—non-Profit

- Master Composters
- Gardening
- Community Centers
- Affordable Housing

State & National:

- NM Healthy Soil
- Institute for Local Self Reliance
- ReFed



Pilot Project Milestones

TESTING:

- Establish 1-3 pilot designs
- Effectiveness:
 - Rate, temp, moisture
- # holes
- Open / waterproof bottom
- Max damage
- Recovery method, ease
- # Households/ bin
- Browns location, aesthetics
- Documentation by testers
- Get 95 Gal from WM
- Cut off bottoms
- Potential Demand free/sales
- Distribution Sites: Compost, Comm Gardens, locked w bar code? Stores?
- \$\$ Grant?
- Promotion sites/events
- Determine costs, labor for conversion

Promotion sites/events



- Master Composter Trainings
- Websites:
 - Little Green Bucket
 - Master Composters
 - NM Healthy Soil
 - Sierra Club
 - BernCo
 - CABQ

Existing Promotion

SOLID WASTE

ONE
ALBUQUE
RQUE



> Trash Collection & Drop-Off

> Recycling

✓ Green Waste

Backyard Composting

Treecycling

> Hazardous Waste

> Keep Albuquerque Beautiful

> Clean Cities Programs

> Frequently Asked Questions

> News

> Events

> Our Department

Fixit Clinic Registration Form

Temporary Relocation

HOME > SOLID WASTE > GREEN WASTE > BACKYARD COMPOSTING

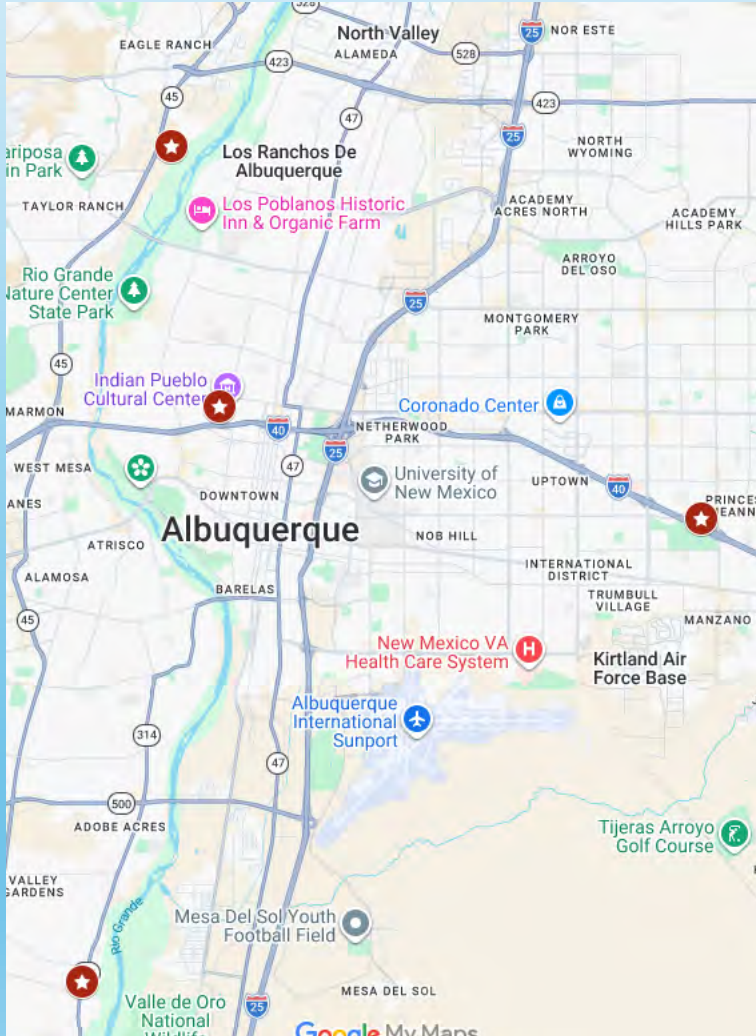
Backyard Composting

Composting is a form of recycling you can do to help save space in our landfill while creating benefits for your plants and gardens.



Composting turns organic (natural) materials such as grass, leaves and shrub clippings into dark brown, crumbly, sweet-smelling soil conditioner. Compost added to the soil of potted plants makes them healthier and greener. Compost holds moisture and nutrients for the garden so flowers and vegetables are more beautiful and abundant. Compost also saves money by decreasing the need for fertilizers and water while conserving natural resources.

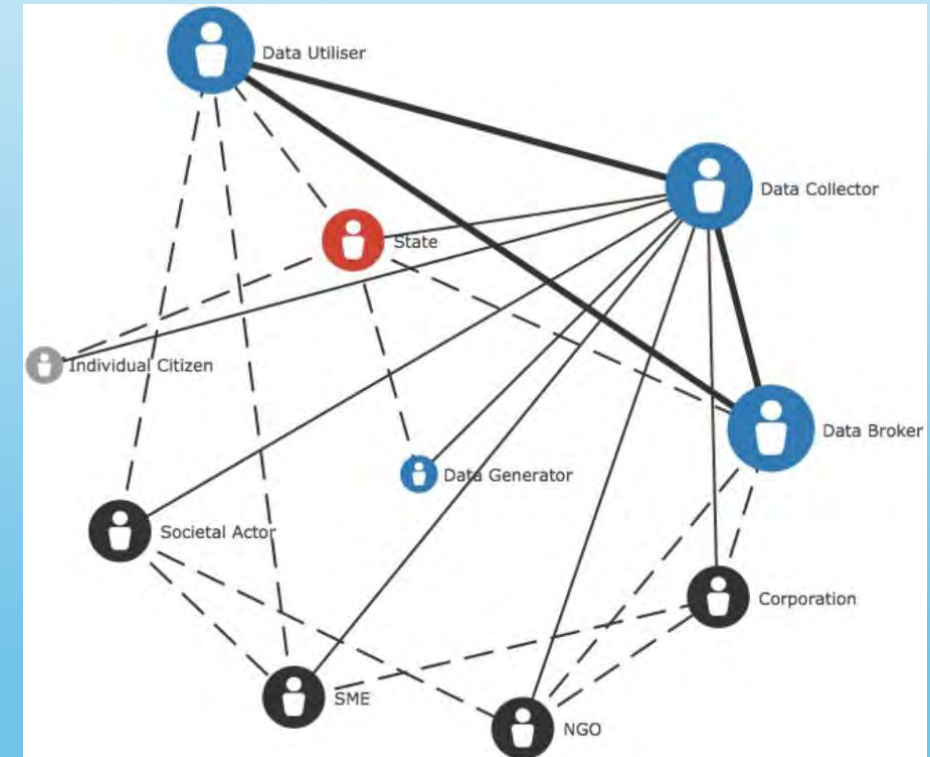
Potential Distribution, Training & Demonstration



- Albuquerque Garden Center
- Bernalillo County Extension Office
- Gutiérrez-Hubbell House
- Open Space Visitor Center

Collaborations, Phase 2—Municipal and Commercial

- Mayor's Office
 - Rio Rancho, Los Ranchos
- Bernalillo County
 - NM Admin Instructions 6-2 wrt Surplus Property
- City Waste Management
 - Cart Management
- Waste Management, Inc
- Barco
- Multi-family property mgt



What: Potential Barriers & Traditions



- ABQ Contract w/ Barco
- Policies
 - Commercial
 - Municipal

Codes

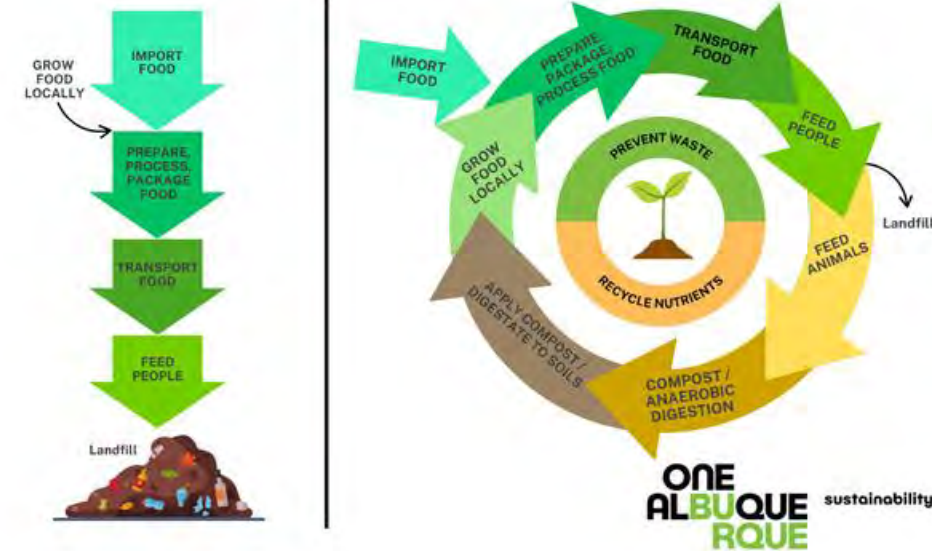
Information & Misconceptions

Marketing & Messaging

Albuquerque Waste Reduction Community Compost



LINEAR FOOD SYSTEM → CIRCULAR FOOD SYSTEM



- Aspirational
- 2023 Food Waste Estimate: 112,000 Tons
- Household Based Waste Reduction
- Backyard Composting &
- Neighborhood Collection Sites