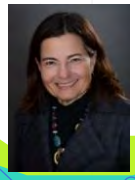
Lisa A. Skumatz, Ph.D.
Dana D'Souza
Skumatz Economic Research Associates (SERA)
Skumatz@serainc.com



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PAYT/SAYT: MOVING DIVERSION FORWARD IN OHIO

Practical Implementation Strategies

Miami Valley, OH Working Group, 11/18/20

Source: SERA 2020; may be used with permission, please cite if used

35 years in PAYT, Solid Waste Planning and Evaluation, Rates & Funding, Forecasting & Scenario Analysis
www.serainc.com

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TOPICS

1. Background on PAYT
2. PAYT's potential to help in OH
3. Strategies for communities:
   - Muni
   - Contract
   - Subscription / Private Haulers
4. Pricing and Containerization
5. Maximizing the PAYT "Bang"
6. Summary / Conclusions

Focused, because just 20 minutes. More details available.

Bio: Why Skumatz/SERA on PAYT? National leader in PAYT. 35 years in PAYT and helping large & small Communities with all phases of PAYT Including feasibility / options / cost, rates, Impacts, RFPs, ordinances / legislation, Implementation. Much-cited quantitative research on PAYT and 50+ publications. Databases & info, counts, design, performance nationwide for states & EPA. Provided statewide manuals, rate models, trainings / webinars, and hands-on tech assistance in many states. Residential & commercial PAYT expertise.
State PAYT advisors in 6 states, EPA & regions.
Skumatz@serainc.com; 360.261.3069.

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Background: Does PAYT / SAYT Work?

1

Vital part of diversion success

3

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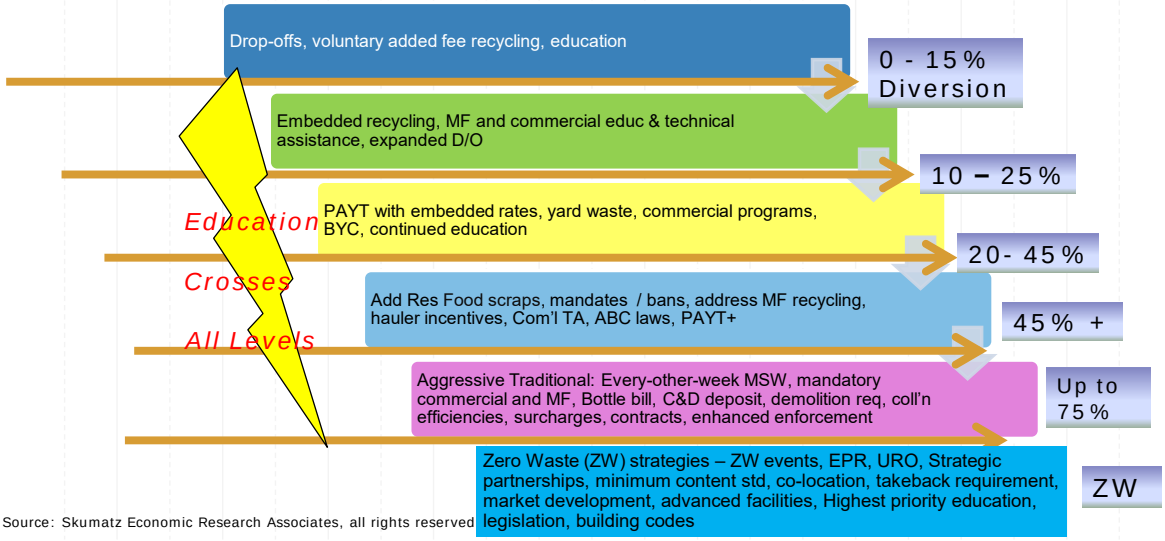
PROGRAM EVOLUTION



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DATA AND STATISTICS – "PROVING" SOMETHING (like PAYT) WORKS

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Data

SERA collects wide variety of data from 1000+ communities & oversampling from 100 largest
(…and thanks to you that provide it!)

Statistics over Case Studies

Power of large data sets and statistics

- Case studies / hypotheticals vs. causation & transferability ("holding other factors constant')
- … database ALSO provides us examples of pretty much any program / policy in place in the US or Canada
- *SERA relies on data, not hypotheticals, case studies*

Source: Skumatz / SERA

Source: Skumatz / SERA 5

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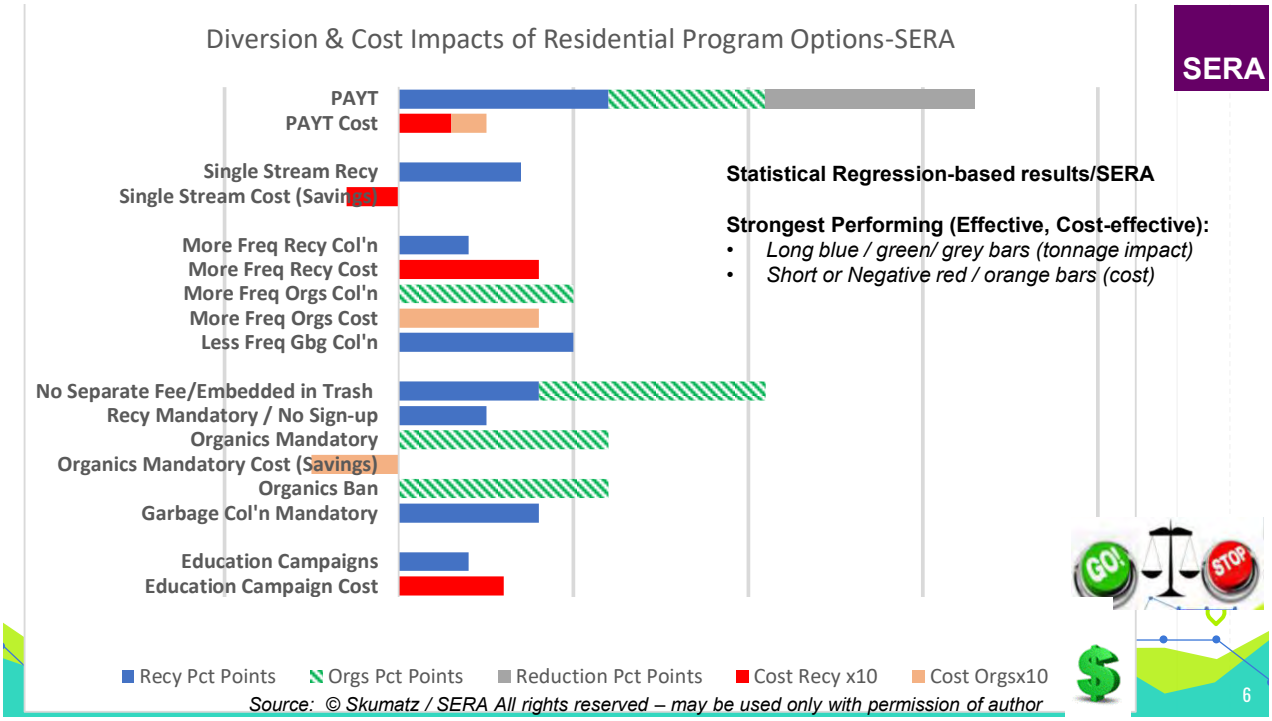

Statistical Regression-based results/SERA

Strongest Performing (Effective, Cost-effective):

- *Long blue / green/ grey bars (tonnage impact)*
- *Short or Negative red / orange bars (cost)*

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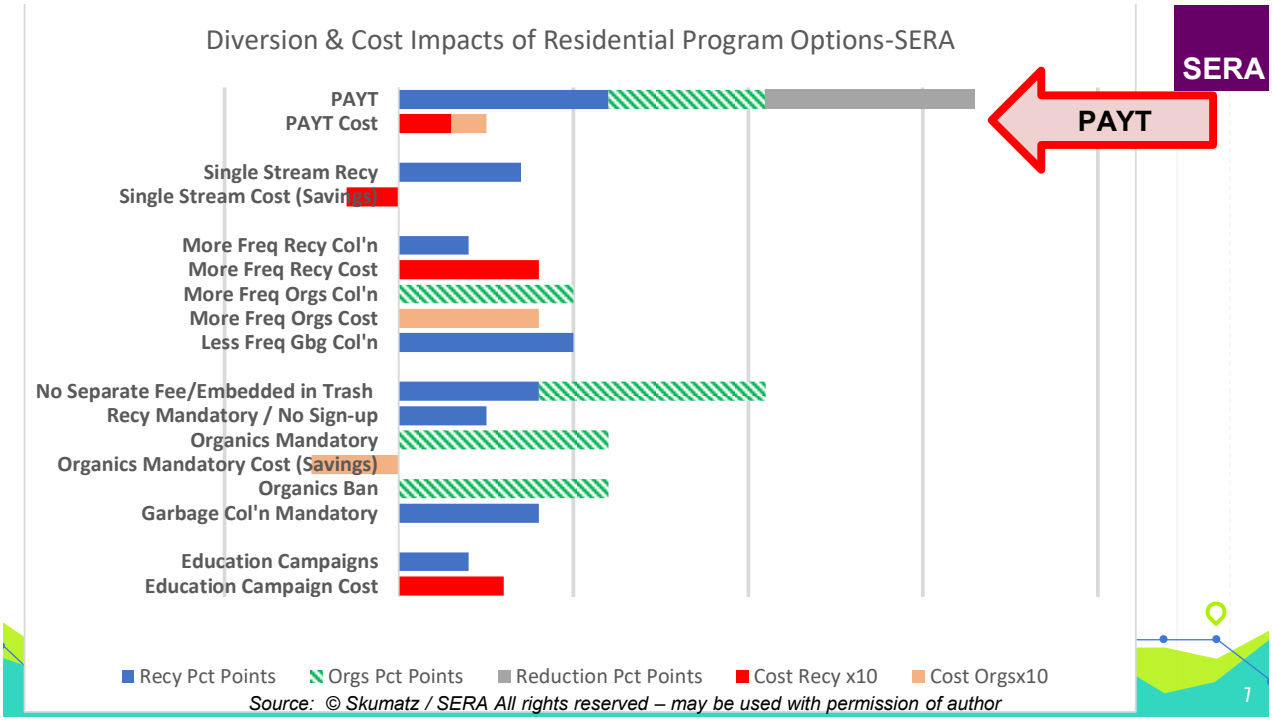
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Cost Recy x10
Cost Orgsx10
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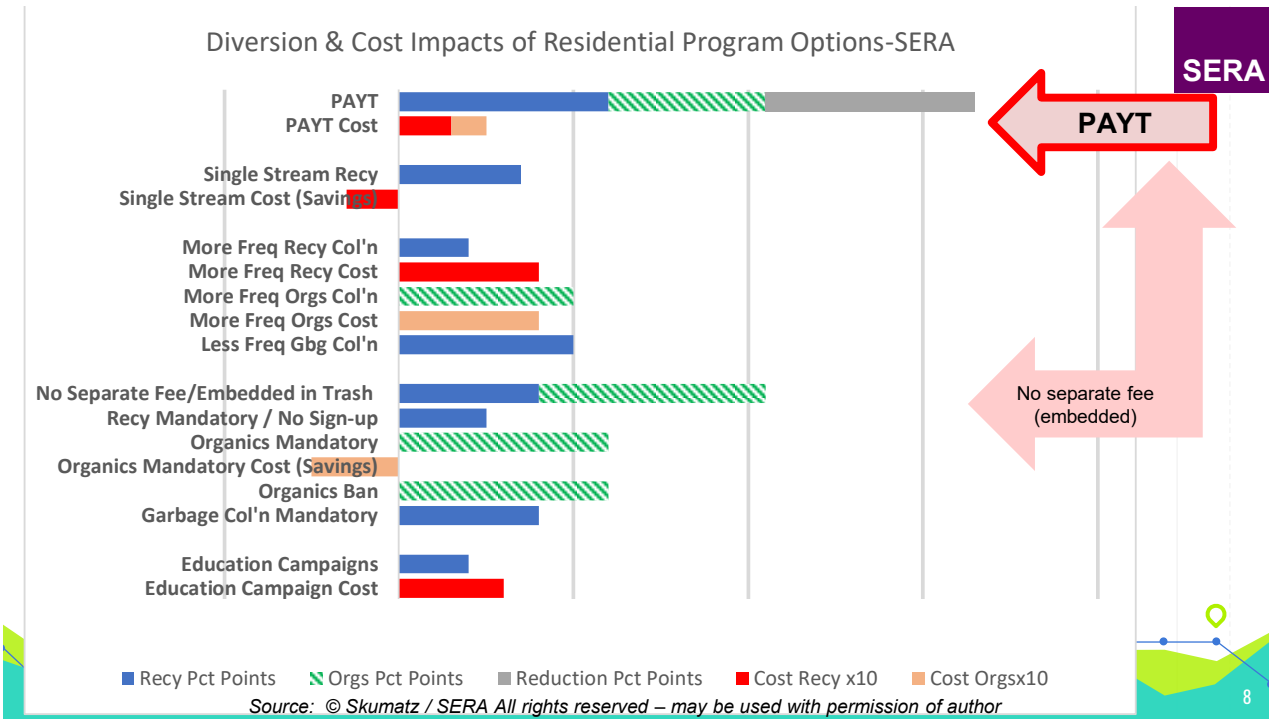
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Recy Pct Points
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Cost Recy x10
Cost Orgsx10
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GETTING PAST STAGNANT RECYCLING - PAYT / SAYT IS KEY

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- **No-brainer for SF-MOST C/E**
  - 17-18% reduction in Trash:
    - ✓ 6% to Recycling (curb & d/o
    - ✓ 5-6% to Organics,
    - ✓ 6% to Source Reduction
    - ✓ Doubles recycling with embedded fees
  - Rewards all waste reduction behavior, not just recycle
  - Pays for itself – thru fees – change in billing system. "No" City Cost
  - No new trucks down the street
  - Preferred by 90% plus AFTER fact
  - Top driver in leading towns
  - Effectiveness, equity, like utilty
- **Best Practices / Design (SERA)**
  - Small container available
  - Sufficient price difference
  - Convenient recycling (large can)
  - Embed program costs
  - Parallel containerization
  - Inspection / Enforcement
- **Special considerations**
  - HOAs
  - **Consider Commercial PAYT/SAYT**
  - Delay MF
- **Main Ways to Implement**
  - Ordinance / contract / muni
  - Differences / Pros / Cons
- **Drawbacks**
  - Cart financing
  - Concerns about low income
  - Illegal dumping
    - ✓ <20% , Short-lived
    - ✓ MUST accommodate bulky
    - ✓ Urban special issues
  - Complexity, rates, inventory
  - Hauler worries (should LIKE it)
  - Not widely in place in MF: options in place / tried ; pos & neg approaches (incl. bags)

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Source: Skumatz / SERA 9

PAYT / SAYT – NOT UNCOMMON ➔

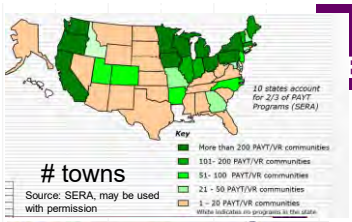
- 10,000 communities
- About 25%+ of population has access
- Some states require PAYT
- Main Types: cart, bag/tag, hybrid*

(*) Hybrid "caps" current unlimited service at 30-60 gallons, paid for using the current billing system, and then Puts in a "logoed paid bag" program for higher levels of waste.

SERA found majority of largest 100 cities have PAYT / SAYT … but also found "tons left on the street" from sub-optimal PAYT

HOW TO IMPLEMENT:

- ✓ Ordinance, contract, muni
- ✓ No cost / minimal cost for City

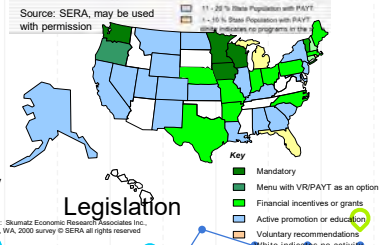


towns

Source: SERA, may be used with permission

Population

Source: SERA, may be used with permission



Legislation

Source: Skumatz Economic Research Associates Inc., Seattle, WA, 2000 survey © SERA all rights reserved

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PAYT

- PAYT has been around since the 1910s
- PAYT has been core to aggressive diversion levels (cities stretching for 50%-75% and more)
- AND You cannot get to ZW without PAYT

- What about Multi-family?? Defer to after Single-family & Commercial… THE hardest nut to crack, even in leading cities (sorry!)

Source: Skumatz / SERA

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COMMERCIAL PAYT

- Vital to get past the problem of
  Trash + recycling cost >> trash cost alone
- Solved by using residential model: cost of recycling embedded in trash bill (trash + recycling = trash cost

(Don't mislead – very Hard for businesses to save money)

- In place across US, mandated in multiple jurisdictions
- Usually implemented by requiring 50% - 100% of volume in recycling
- Highly recommended; improves performance of all programs (bans, mandates, ABC, recognition, C&D deposit, etc.)

Source: Skumatz / SERA

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PAYT's Potential to Help in Ohio – Focus on Residential

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PAYT AND OHIO

Increasing Diversion to Goals

PAYT diverts 12-18 extra percentage points at the community level; with the high numbers in communities with organics programs in place.

1/3 each for added recy, organics, and source reduction (SERA)

Increases Recycling

PAYT increases incentives to recycle more than any other program.

PAYT works with curbside or drop-off recycling.

More recycling decreases the collection cost per ton.

Saves in Disposal fees and Encourages Source Reduction

Each ton recycled saves disposal costs.

Recycling fees increasing, but also leads to Source Reduction, which has ZERO COST.

Source: Skumatz / SERA

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PAYT AND OHIO

- **PAYT Implementation costs can be low**

PAYT (itself) is mostly a new billing system, not new collection.

The program can be implemented with minimal change to existing collection, building onto existing collection systems.

- **PAYT is least costly, most cost-effective strategy**

As mentioned, PAYT is mainly a new billing system, not new collection.

Statistical studies show PAYT provides the greatest tonnage increase at least cost of more than a dozen strategies researched.

- **Citizens tend to favor PAYT after the fact**

Between 89-95% of customers prefer PAYT *after* it is implemented. The first 3-6 months can include complaints about change. Up front the majority think it is more fair.

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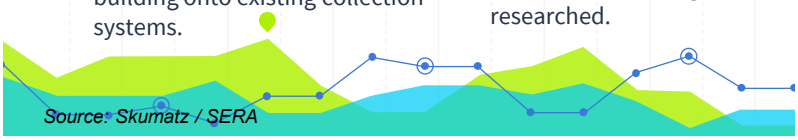

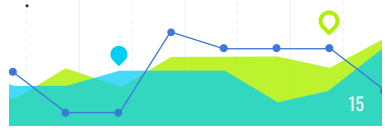

Source: Skumatz / SERA

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PAYT AND OHIO

- **Treats trash as a utility – Equitable and users pay – own funding source and slows tax increases**

PAYT is its own funding source – users pay, and pay bills in a new way, based on use like electricity and water.

PAYT slows tax increases by moving to a usage-based fee-type system.

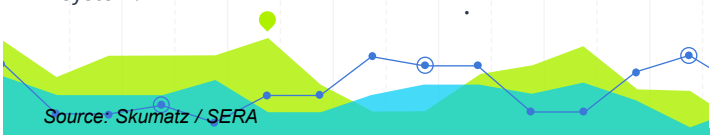
- **Citizens have more control over their costs and bill**

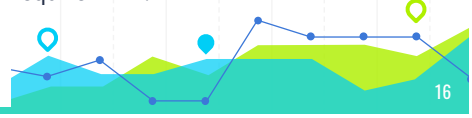
Households are able to get more control over the size of their bills, and small (or elderly, etc.) households no longer subsidize large disposers and non-recyclers.

.

- **Successful PAYT programs in place in OH**

SERA's national inventory shows there are multiple successful PAYT programs in the State, hundreds in the Region, and more than 10,000 programs nationwide in large, small, urban, suburban, and rural communities with curbside and drop-off programs and all collection arrangements. In addition, several states require PAYT.





Source: Skumatz / SERA

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PAYT AND OHIO - CONCERNS

Illegal dumping: Does not tend to increase litter / illegal dumping increases. When it happens, it is less than 3 months. ➔ must have convenient methods for bulky waste (and some changes to periodic "clean-ups").

Unpaid bills: addressed easily if combined with water service bills…

Plastic from PAYT bags: discussion on both sides

Low Income households: Large disposers pay more, which is not necessarily low income. All can (including LI) save by recycling. Can offer discounted bags for LI qualified households. This policy choice is only in place is a small minority of communities.

More complicated rate study: The math is not hard, but a greater understanding of household setouts is needed to mitigate revenue risk.

Cost?: Studies in 2 states found PAYT did NOT increase city costs for 2/3 of those implementing. Pick the best fit system for you!

Really about single hauler, or made to favor large haulers: PAYT is in place with large and small haulers across the US. Some financing issue may arise with cart-based systems.

PAYT does not require or favor single hauler or contracts. It is in place in areas with subscription haulers across the country.

Haulers should prefer the program; best practices deliver embedded recycling (costs and associated profits) for all households serviced meaning required business growth.

Source: Skumatz / SERA 17

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Implementing PAYT in OH

Understanding strategies for communities

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PAYT BEST PRACTICES – BEST PERFORMING RESIDENTIAL PROGRAM DESIGN

- Convenient recycling options available (Must have large recycling cart)
- Incentivizing level of price difference (50-80%+)
- Small trash container option available
- Recycling costs embedded in trash fee
- Parallel containerization
- Education
- Reporting / monitoring / access / enforcement (level playing field)
- … Otherwise PAYT may not be worth the administrative hassle…

Works with bag/tag, can, hybrid, drop-off collection systems

Source: Skumatz / SERA

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HOW OH COMMUNITIES CAN MOVE TO PAYT

Municipal Collection

- Resolution?
- Container choice
- Rate computation

+Normal change items – Facility checks, approval / public processes

Enterprise or not?

Contract Communities

- Negotiation if existing contract lasts long
- Discussion of recycling change capacity
- or RFP with updated PAYT requirements

+Normal change items – Facility checks, approval / public processes

Open Subscription Hauler

- Ordinance requiring all haulers operating to offer PAYT with some specific requirements (%, Recy)

OR

- RFP/Contract route (next page). Needs "notice", etc.

+ Normal change items

Source: Skumatz / SERA

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PAYT VIA ORDINANCE VS. CONTRACT FOR SUBSCRIPTION HAULER AREAS

Ordinance Advantages	Contract (and muni) Advantages
➢ Fewer Hauler ("Taking") & Citizen Complaints ("Choice") ➢ Maintains competition ➢ No need for "notice" ➢ Quick ➢ Can specify rate "structure" ➢ Hauler does billing ➢ Minimal City effort (RFP, etc.) ➢ Retains "level playing field" for haulers – each implements the program and provides services knowing others will be operating under same rules.	➢ Lower Cost / bills ➢ Fewer trucks, "cleaner" set outs, reduced wear/tear on streets and emissions ➢ One hauler to contact if problems arise. ➢ City "control" including rates/setting; revenues; city OR hauler may do billing ➢ More flexible / easier to enforce penalties than ordinance ➢ Can "designate" facility destinations for materials ➢ Potential revenue source ➢ (Similar for franchise / district EXCEPT may not get lower bills if multiple awardees)

Source: Skumatz / SERA, Rights reserved

We have sample language for ordinances and RFPs

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Pricing and Containerization

Nitty gritty, but options manageable

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CARTS VS. BAGS

Carts and Bags AND combined (hybrid) systems work for PAYT.

Cart advantages	Bag advantages	Hybrid
➢ Cheaper for residents (5+ years) ➢ More convenient for residents (don't run out) ➢ More flexible in incentives ➢ Less revenue risk (pay monthly) ➢ Don't rip, weather, easy to see ➢ Works better with automated - less wear/tear on coll'n staff (enforce) ➢ Addressing LI a little easier	➢ More flexible in sizing / set outs even wkly; pay for what you use weekly ➢ No billing system needed (invoicing only) ➢ A little more difficult for large items ➢ Doesn't require up-front purchase cost ➢ Doesn't take up room in garage / yard ➢ Servicing easily at stores, via contracts ➢ Doesn't need special trucks ➢ No cart changes/labor/storage	➢ Don't need to change base collection or containers ➢ Don't need to add new billing system ➢ Doesn't work with fully-automated collection ➢ Can optimize out of pocket "extra" costs design
Steps for Adding Carts	**Steps for Adding Bags**	**Steps for Hybrid**
➢ Ownership decision ➢ *Funding* purchase ➢ Choice/Order/Assembly/Roll-out ➢ Switches and storage ➢ Billing system required;outreach	➢ RFP for logo-ed bag purchase (choose sizes) and/or purchase & supplying (see prices from statewide contracting) ➢ Availability, invoicing, enforcement ➢ Outreach	➢ Same as steps for bag ➢ Outreach for clarity

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DECISIONS AND ANALYTICAL STEPS – CONTAINERIZATION CHOICE

Currently have carts

- Add a new smaller cart option (or 2) **
  - Repurposing / are recycling carts big enough
  - EOW option
- If carts small-ish, can go to cart/bag hybrid (depends on collection truck type)
- Logo-ed bags in cans (enforcement)

Currently have / allow bags

- Switch to requirement for logo-ed bags & education
- Add carts if going to automated collection (1 size if bags in carts or multiple sizes) (need billing system)

Customers supply their own containers

- Hybrid, adding bags to current system (clarify "minimum")
- Switch to logoed bags
- Switch to carts if planning in longer run

(**) funding new carts can be an issue: can discuss upon request (with more time) options including leasing, loans, loans from other funds, customer purchase, using contracts to finance carts paying balance after 3-5 year contract. Cart ownership is also an important discussion issue.

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DECISIONS AND ANALYTICAL STEPS – PRICING, STRUCTURE, INCENTIVES

Principles & Options

Need substantial-enough variable portion to provide incentive

Better to embed recycling cost; don't line-item

ANY option can be all in or two-part, using enviro fee plus user fee. Reduces revenue risk, but this pulls away from meaningful variable incentive

REDUCE revenue risk with set out survey & calculation of reductions AND comparison to other communities – and Phase-out

Carts

Need small cart option to provide meaningful reward

Differential must be 50-80% more for double the service volume to change recycling behavior.

Can be less than 100% for double volume.

Billing is fixed repeated $

One or 2 part ok; Math is easy

Bags (or hybrid)

Can do one (or 2) sizes to provide options; naturally provides options

Differential should be substantial per bag (~$1.75-$2+ minimum per 30-35 gallon bag)

One or 2 part rate OK; math is very easy

No billing needed – invoice stores

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DECISIONS AND ANALYTICAL STEPS – BILLING SYSTEM

	Going to Carts	Going to Bags	Going to hybrid
Currently billed in Taxes	➢ Consider removing from taxes over time ➢ Maybe keep enviro fee (rev. risk) ➢ Must install new billing system; consider joint bill with other city utilities if possible; bill with water best – can shut off water if trash unpaid ➢ Only needs to be recurring fixed bill amount	➢ Consider removing from taxes over time ➢ Maybe keep enviro fee ➢ No new billing system needed; households pay directly for bags	➢ Remove variable portion to assign to bag fee ➢ No billing system required
Currently Bill	➢ Change to recurring fixed amount ➢ Keep a small enviro fee or eliminate	➢ No household billing needed ➢ Keep small enviro fee or eliminate	➢ Same as bag
No bill but muni bill available	➢ Move fees to combined billing, especially if water; change trash to last credited if partial payments received; can shut off water then.	➢ No household billing needed ➢ May choose to add base enviro fee; change to last credited if partial payment	➢ Same as bag

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DECISIONS AND ANALYTICAL STEPS – MINIMIZING REVENUE RISK

- Require mandatory collection service (with enforcement)
- Conduct a set-out survey
  - and put in excel, reduce for diversion and stomping effects and see distribution
- Look at set outs for other similar communities
- Use carts or include a base or environmental fee with bags or cans
- Phase out of current funding system

Source: Skumatz / SERA

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Maximizing the PAYT "Bang"

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DECISIONS AND ANALYTICAL STEPS

- Decision-making (we can inform, but not decide for you!)
- Public Process
- Facilities

These are *your* issues to address… ! (☺)

BUT… Getting to High Diversion using PAYT + Key "NOW" Winning Strategies ➔ that we CAN help you with! ➔

Source: Skumatz / SERA

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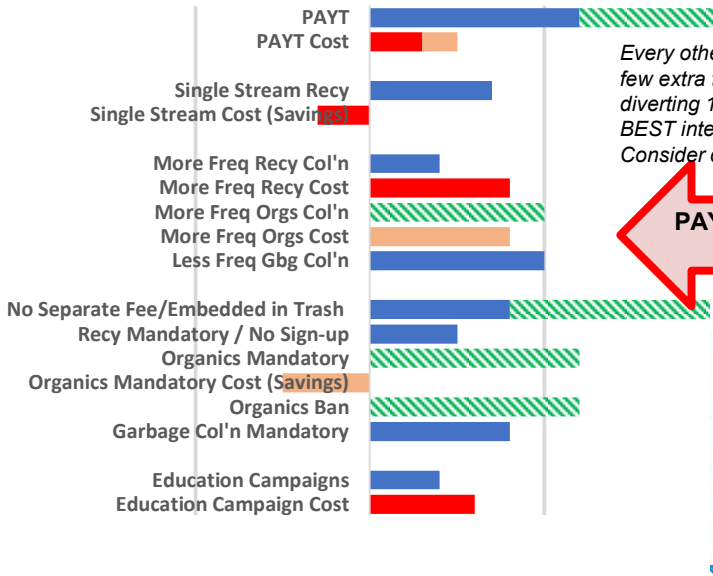
Diversion & Cost Impacts of Residential Program Options-SERA



Every other week recycling (NOT weekly!), 2x cost for very few extra tons. Instead, use that stop instead for ORGANICS, diverting 15-20% more material (opt out/in options)
BEST integrated collection: Weekly Organics, EOW trash/recy
Consider contracts / districting if needed for efficiencies, control.

PAYT PLUS Optimizing Frequency & Mat'ls (Add Organics at minimum cost!)

LOWER COST/MONTH

MORE DIVERSION

3 stops / week – old style! (Trash 2x/wk) Recy wkly	**2 stops / week** Trash wkly Recy wkly	**1.5 stops / week** Trash Weekly Recy EOW
3 stops / week Trash wkly Recy wkly Org wkly	**2 stops / week** Trash wkly Orgs & Recy Alt	**1.5 stops / week** Trash EOW Recy & Org Alt
	2 stops / week Orgs Wkly Trash & Recy Alt	**1.5 stops/wk** Wet wkly / dry EOW

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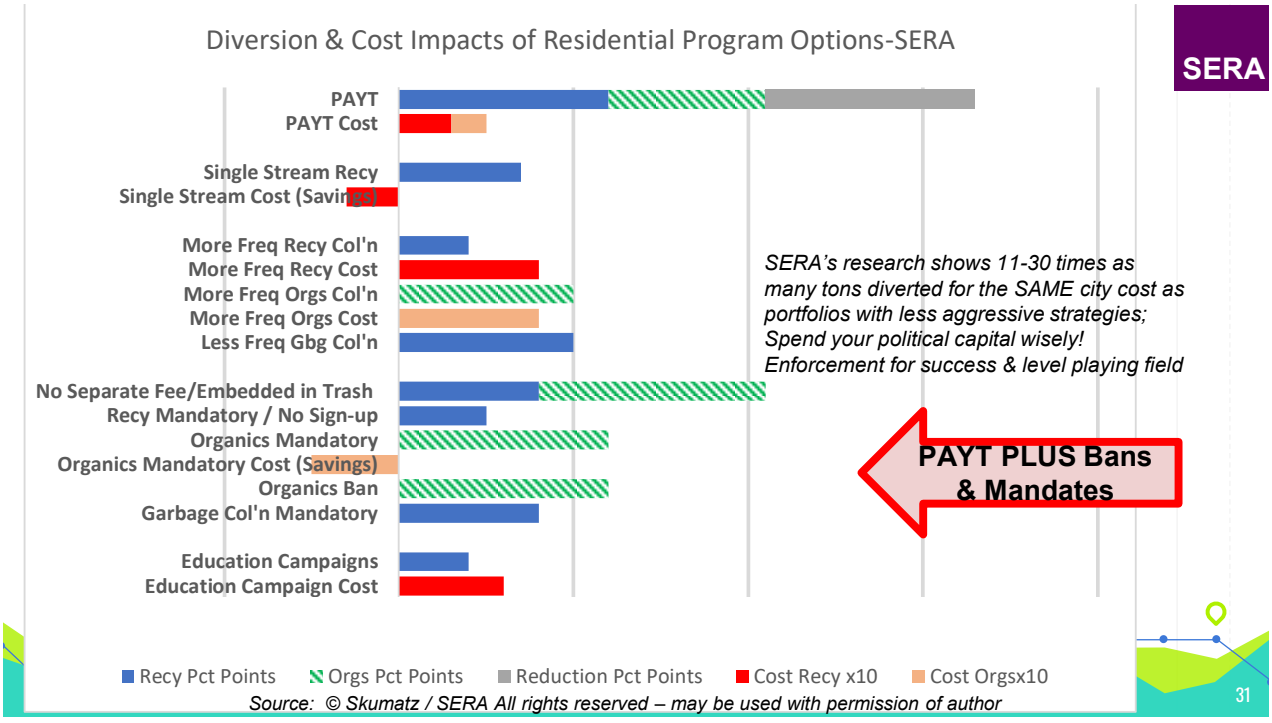
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Organics Mandatory Cost (Savings)
Organics Ban
Garbage Col'n Mandatory
Education Campaigns
Education Campaign Cost
SERA's research shows 11-30 times as many tons diverted for the SAME city cost as portfolios with less aggressive strategies; Spend your political capital wisely! Enforcement for success & level playing field
PAYT PLUS Bans & Mandates
Recy Pct Points
Orgs Pct Points
Reduction Pct Points
Cost Recy x10
Cost Orgsx10
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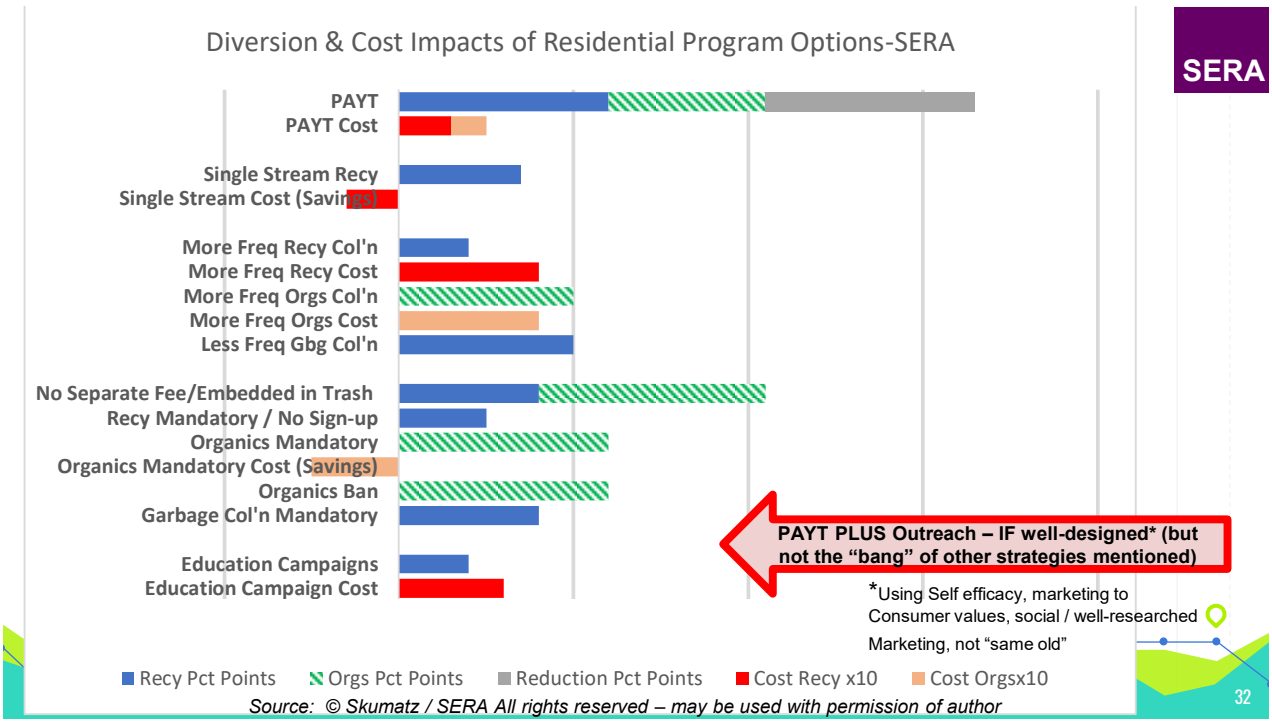
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Education Campaigns
Education Campaign Cost
PAYT PLUS Outreach – IF well-designed* (but not the "bang" of other strategies mentioned)
*Using Self efficacy, marketing to Consumer values, social / well-researched Marketing, not "same old"
Recy Pct Points
Orgs Pct Points
Reduction Pct Points
Cost Recy x10
Cost Orgsx10
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Summary 6

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A FEW EXAMPLE PAYT COMMUNITIES

OH

- Tipp City
- Bellefontaine
- West Liberty
- Lake Township
- Amherst
- Avon Lake
- Camden

OH

- *Montgomery County^*
- *Butler County^*

^Recommended PAYT in latest SWMP

SERA's National Inventory has Many examples of:

- Private vs. contracted haulers,
- Carts, bags, hybrid
- Aggressive vs. milder PAYT

National leaders

- San Francisco, Bay Area, much of CA
- Seattle, Portland, surrounds, and States of WA and OR
- Boulder, CO
- 10,000 communities across US have access to PAYT using cans, bags, tags

Source: Skumatz / SERA

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SUMMARY –

MOST COST-EFFECTIVE WAY TO INCREASE DIVERSION CONTROLS COSTS, FAIRER, REASONABLE IMPLEMENTATION APPROACHES FOR EACH SITUATION

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- 20 minutes, so high level only!
- Not that complex; find your town's "situation" in the previous slides & follow steps.
- PAYT is biggest bang option for jumping toward state / regional goals
- Cheapest, most cost-effective option
- Makes existing programs more cost-effective
- Perceived as fairer
- Fee-based; cost control
- Affordable implement-tation - No new trucks / mainly billing change
- Math isn't hard – revenue risk takes a little planning
- Successful across OH, Region, and US / trend
- Straightforward implemen-tation in multiple situations – in place in rural, urban; hauler, muni, contract.
- Negatives can be dealt with if political will to do so.
- ***Can be implemented in straightforward way in OH. Known steps for each situation.***

Source: Skumatz / SERA

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THANKS!

(Win-Win. You can totally do it)

Questions?

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More info & resources and publications on www.Serainc.com and www.paytnow.org

Or call us; we have models, decision trees and other resources and ***can usually provide help at basic levels for FREE for communities / governments.***

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